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Popular Article

Bihar's Aquatic Wonders: Exploring the World of Freshwater Crabs

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Abstract

Bihar's freshwater crabs, hidden gems within its waterways, contribute significantly to the region's diverse aquatic ecosystems. Despite their adaptability and ecological importance, these crabs face threats due to deforestation and pollution. Urgent conservation actions are necessary to protect both their habitats and the rich biodiversity they represent. Bihar's freshwater crabs are not only essential for ecological balance but also hold potential for medicinal and economic benefits, underscoring the importance of their preservation.

Introduction

When we think of Bihar, the first images that come to mind are often lush farmlands, historical monuments, and rich cultural traditions. However, this diverse Indian state also harbours a hidden gem beneath its waters: a world of freshwater crabs that boasts its own unique charm. In this article, we will dive into the fascinating realm of Bihar's crabs, shedding light on their intriguing characteristics and vital role in the state's ecosystems. Bihar, in eastern India, has this amazing network of rivers, lakes, and wetlands that basically shape its look and take care of its wildlife.

The big-shot Ganges, known as India's life support, runs right through Bihar, making the soil super fertile for farming and keeping the fields hydrated. And it's not just the Ganges; there are other cool rivers like the Gandak, Kosi, Sone, and Mahananda that crisscross the state, making it all green and cultural. These rivers aren't just for show; they're like nature's pipelines for watering the farms. Plus, they're like a fancy buffet for all sorts of water creatures, including freshwater crabs. Those little crab buddies have a party in there, alongside other aquatic pals! Now, let's talk about Bihar's lakes and wetlands. Kanwar Lake Bird Sanctuary, the big cheese in this category, is like a pit stop for birds migrating from who-knows-where. Birds come from far-off lands to chill here for a bit. Then you've got Harikund, Motijheel, Karakatgarh, and Rajgir Wetland; these places aren't just pretty, they're also like nature's cleaning crew, doing important stuff for the environment.

Meet the Amazing World of Freshwater Crabs!

When we think of crabs, we often picture those scuttling along the sandy shores of the ocean. But did you know that there's a whole other world of crabs that call freshwater habitats home? These amazing creatures are quite different from their beach-dwelling cousins, and they have some fascinating tricks up their sleeves.



What Makes Freshwater Crabs Special?

Freshwater crabs are like the rebels of the crab world. They've evolved to thrive in a wide range of environments, from rivers and ponds to even dry land. The most incredible thing about them is that they don't need the salty ocean to survive. They've found a way to live life on their terms, away from the sea.

The Incredible Diversity of Crabs

Crabs are way more diverse than you might think. Globally, there are a mind-boggling 6,700 different crab species. But when it comes to these freshwater marvels, there are about 1,564 unique types.

India's Freshwater Crab Scene

In India alone, there are 125 species, and they belong to 8 families namely Pseudothelphusidae, Trichodactylidae, Potamonautidae, Deckeniidae, Platythelphusidae, Potamidae, Gecarcinucidae and Parathelphusidae (Rodríguez and Magalhaes 2005). If you're curious about Bihar, they've got their own gang of eight different freshwater crab species. It's like a mini crab party right in your own backyard! In River Burhi Gnadak and its oxbow lake, Manika at Muzaffarpur district of Bihar alone accommodates three crab species making their presence known. These are *Sartoriana tribolata*, *Acanthopotamon martensi*, and *Sartoriana spinigera*. These little crab buddies are adding their unique flair to the local ecosystem, each with its own story to tell.

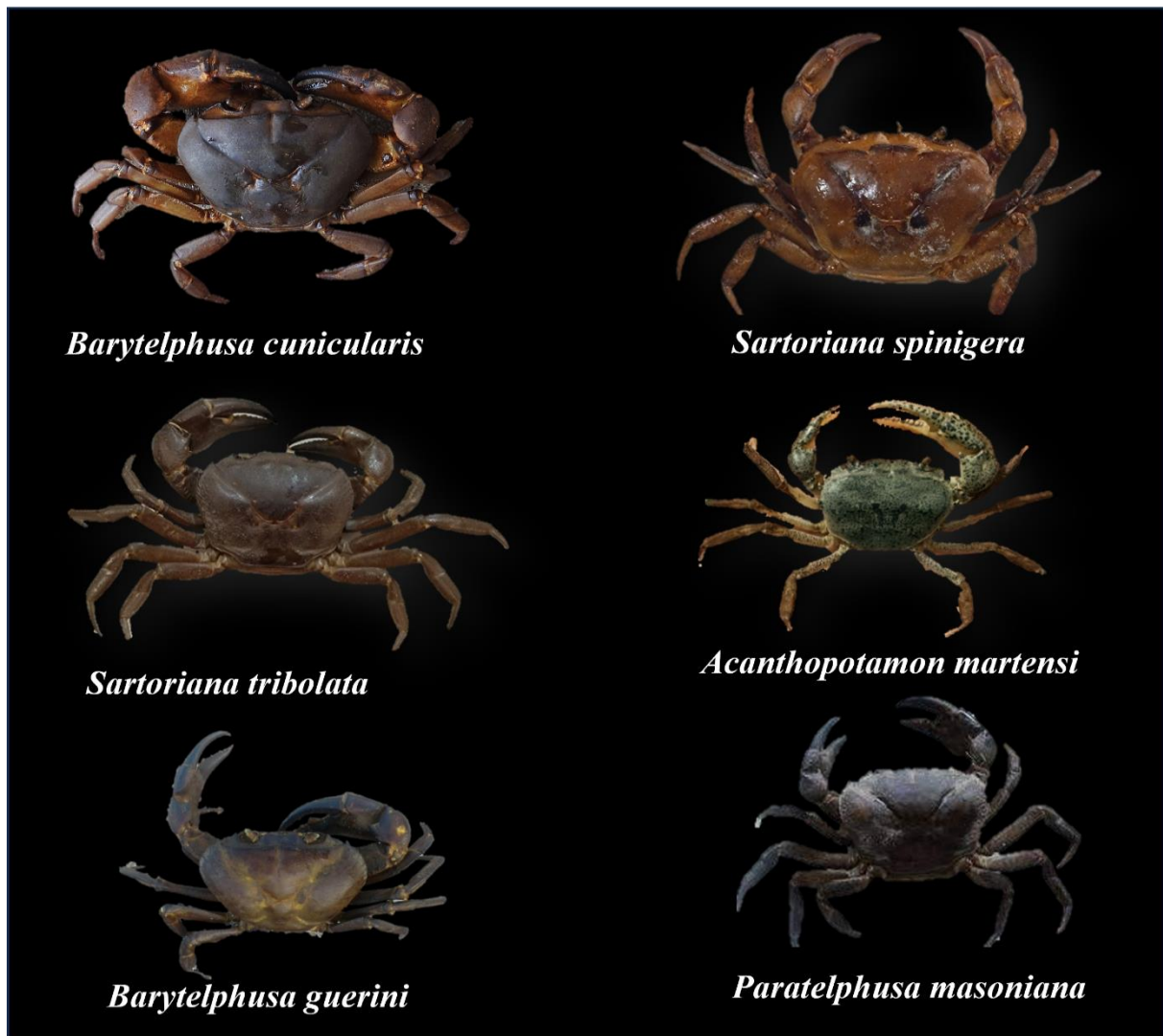


Fig 1. List showing Freshwater crabs of Bihar



Night Owls of the Riverbank

Freshwater crabs are the ultimate night owls (Hill and O'Keeffe, 1992). As soon as darkness blankets their watery world, they emerge from their burrows. It's like they're on a mission, scouring the riverbed for tasty treats. But here's the catch: they're masters of timing. By the time the first light of dawn appears, they've already retreated to their burrows, safe from daytime predators. Their nighttime activities reveal just how smart and adaptable these crabs are in their natural habitats. They've figured out the best time to hunt and the best time to hide, making them true survivors of the night.

A Varied Diet

When it comes to food, freshwater crabs aren't picky eaters. They're omnivorous, meaning they'll feast on a variety of goodies. Plants? Sure! Live or dead creatures like fish, prawns, and molluscs? Absolutely! Sometimes, they even resort to cannibalism, munching on their own kind. Their diverse diet showcases their ability to make the most of their surroundings.

Crucial Players in the Food Chain

These crabs play a vital role in the river's food chain. They act as connectors, linking different parts of the ecosystem. By eating various types of food, they help keep the river's balance in check. It's a reminder that every creature, no matter how small, has a significant impact on their environment (Costa *et al.*, 2016).

So, the next time you're near a river at night, keep an eye out for these nocturnal explorers. They're the mysterious creatures of the dark, showing us just how incredible nature can be, even under the moonlight.

Crabs: The Buffet of the River Ecosystem

Ever wondered who's on the menu in the river ecosystem? Well, one thing's for sure: freshwater crabs are like the grand buffet that keeps many hungry creatures coming back for more. Fish, turtles, birds, and even some mammals have these crabs on their list of favourite treats.

Secrets of Freshwater Crab Romance: Nature's Aquatic Love Story

Beneath the water's surface, freshwater crabs engage in a fascinating love story. Elaborate mating rituals, internal fertilization using specialized structures, and protective pouches for carrying eggs showcase their unique adaptations. Devoted mothers guard and nurture their offspring, which start as tiny planktonic larvae. Some crab species even migrate for better conditions, while males compete fiercely for mates. In a final act of devotion, some females moult to accommodate their growing eggs, ensuring a safe and comfortable space for the next generation. It's a tale of love, devotion, and survival in the dynamic aquatic world (Gangotri *et al.*, 1978)

Freshwater Crabs: A Hidden Nutritional Gem Beneath the Surface

When we think of seafood, our minds often drift to fish, shrimp, or lobster. But let's not forget about the unsung heroes of the water world – freshwater crabs! These little critters not only add flavor to your plate but also pack a surprising punch of nutrition.



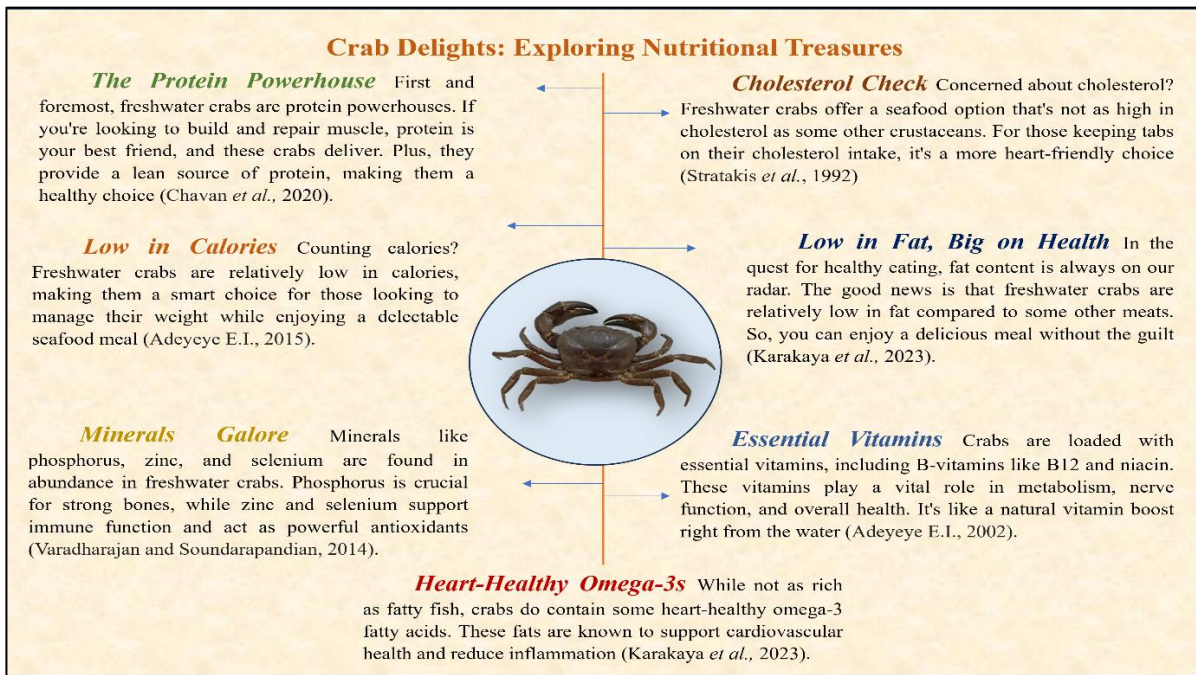


Fig 2. Nutritional values of Freshwater crab

Crabs Under Threat: Protecting Bihar's Freshwater Treasures

We don't really know much about these freshwater crabs (FWCs), which is a bit of a bummer. They're like the mystery creatures of the water world, and that's why they're labelled as 'Data Deficient' on the IUCN Red List. But here's the scoop: they're in trouble, big time. The places they call home are disappearing, thanks to stuff like deforestation, messing with drainage systems, and pollution. And speaking of pollution, these crabs are like the canaries in the coal mine - they can't stand it (Brook *et al.* 2003). It's a tough situation because we're at risk of losing them for good, and that's not cool. These crabs aren't just your average river critters; they're a big deal for nature, might have some healing powers, and can even put some cash in the local pockets. So, there is a need to conserve these freshwater crabs due to their ecological, medicinal, and economic importance (Padghane *et al.* 2016). We're talking about developing action plans, taking care of the forests they live in, and keeping their homes clean and tidy. It's time to roll up our sleeves and give these little guys a fighting chance."

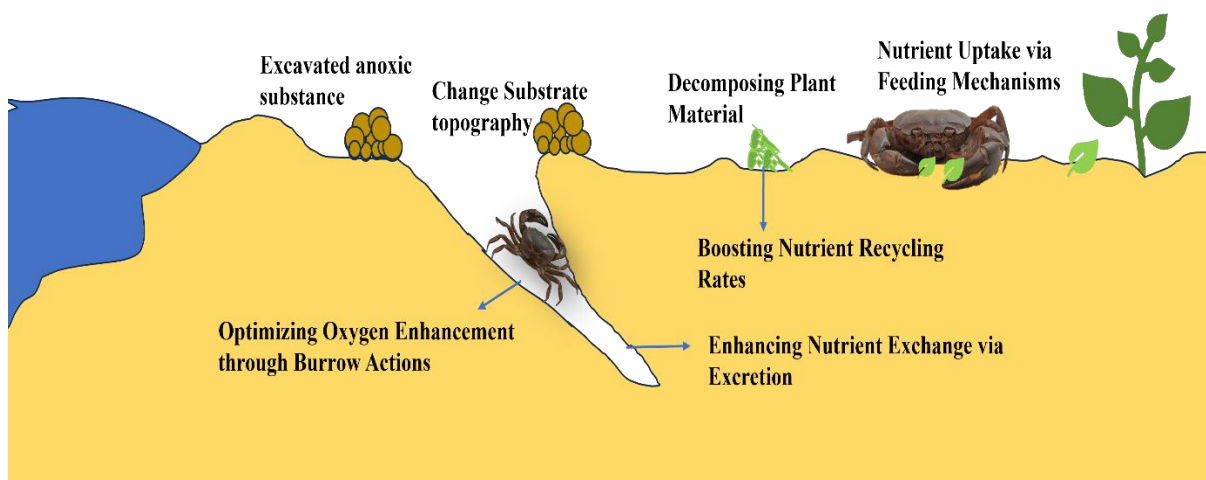


Fig 3. Ecological service of freshwater crab



Conclusion

In conclusion, Bihar's freshwater crabs are hidden gems in its aquatic ecosystems. These resilient creatures have adapted to various environments, but they face a significant threat due to deforestation and pollution. Despite their small size, they play vital roles in the ecosystem's balance. Their unique diversity and importance, both ecologically and potentially medicinally and economically, call for urgent conservation efforts, including protecting their habitats and ensuring water quality. It's time to safeguard these remarkable river residents from the brink of extinction.

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