

## **Insect mediated dry fish spoilage: An insight to bacterial hitchhiking**

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Insect, the largest group in the animal kingdom successfully dwells among different ecological niche and habitat of the world. However, very least information's are available on the roles of insects in developing indigenous and innovative biotechnological tools for the sustainable ecosystem management and biodiversity conservation. In such context the present research studies have elucidated the functional harmful roles in causing spoilage of a diversity of fin and shell fishes having the potential for developing dried fish related industry. A yearlong ecological survey throughout the length and breadth of Sundarbans Mangroves ecosystem have generated some interesting research information pertaining to diversity, mode of seasonal occurrence respectively, with drying fish potential in some selected eco-zones of Mangroves estuaries complex Sundarbans, India. Ten different species of insects belonging to order Coleoptera, Diptera, Hymenoptera, Isoptera, Acarina and Diplura were collected from different research sites. In order to recognize the root cause of spoilage, several anatomical appendages of insects like antennae, legs, abdomen etc. were used to culture any attached microorganisms. Four different species of *Bacillus* sp. were isolated and identified using 16srRNA sequencing. These species were also subjected to Vitek2 analysis to understand their biochemical properties which help to design a bio-pesticide. Somnolently, attempt had been made to identify three different plant species with bioactive substance which appear to be a cause of combating or relating the spoilage of fish protein by its anti-bacterial activities.

### **Biography**

Al-Helal M. A. has completed his Master of Science in Zoology from National University, Dhaka, Bangladesh. He had received prestigious international fellowship named Bangabandhu Science and Technology Fellowship (Ministry of Science and Technology, Government of the People's Republic of Bangladesh) an International Fellowship for pursuing Ph. D. at Vidyasagar University, Department of Zoology, West Midnapore-721102, West Bengal, India. He has developed an expertise in field of insect biology and microbial ecology which enabled him to publish a good number of research articles in esteemed journals.

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