

## 2<sup>nd</sup> International Conference on Sustainable Fisheries 2022

Faculty of Fisheries, Sylhet Agricultural University, Sylhet, Bangladesh is going to organize 2<sup>nd</sup> International Conference on Sustainable Fisheries during 16-18 September 2022.

Please submit your abstract for oral and poster presentation.

Each oral presenter will be entitled for maximum 10 minutes for each presentation, and additional 5 minutes for question and answer. Presenter should use PowerPoint. Overhead projector and video player will not be available. Please mention your submitted abstract either for oral or poster presentation.

### Instruction for preparation of abstract

1. Title: The title should be in CAPITAL LETTER except scientific name.
2. Author(s): Full names of all authors and their affiliations (max. 3) should be included. Use \* after the presenting author with email address.
3. Maximum Length: One page
4. Page Size: Letter 8.5x11 inch paper
5. One inch margin throughout (left/right/top/bottom)
6. Spacing: Single space
7. Paragraphs: Paragraphs should be separated by a blank line and should not be indented.
8. Font: Book Antiqua font with 12 point size
9. Figures and Tables: Figures and tables are highly recommended, which should be clearly readable.
10. The abstract (with tables and figures, if applicable) should be prepared in camera-ready form.

**HISTORICAL DEMOGRAPHY AND GENETIC DIFFERENTIATION OF THE GIANT FRESHWATER PRAWN *Macrobrachium rosenbergii* IN BANGLADESH BASED ON MITOCHONDRIAL AND DDRAD SEQUENCE VARIATION**

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*Macrobrachium rosenbergii*, the giant freshwater prawn, occurs naturally in rivers as well as commercial farms in South and South-East Asia, including Bangladesh. The genetic diversity of *M. rosenbergii* in Bangladesh is under continuous threat. Assessments of population structure and genetic diversity are essential to inform management as ignorance of structure can lead to overexploitation, and escapes from aquaculture can be a risk for locally adapted populations. The aim of this study was to investigate the genetic variation and population structure of *M. rosenbergii* within Bangladesh.

This study investigated the genetic variation and population structure of *M. rosenbergii* sampled from four rivers in Bangladesh by assessing sequence variation both in the mitochondrial cytochrome oxidase subunit 1 (COI) gene and in 106 single nucleotide polymorphisms (SNPs) sampled randomly from the genome with double digest Restriction-site Associated DNA sequencing (ddRADseq). Mitochondrial variation presented a shallow genealogy with high gene diversity (Table 1).

A significant population differentiation was observed based on the ddRADseq variation which could be traced to the divergence of the population in the Naf River in the South-East border with Myanmar from the other populations (Figure 1). This study demonstrated the use of high-throughput genotyping based on the ddRADseq method to reveal population structure at a small geographical scale. The information from this study can be utilized for management and conservation of this species in Bangladesh.

Table 1. Genetic diversity in *Macrobrachium rosenbergii* from Bangladesh, based on mitochondrial COI gene

Gene	Site	N	N <sub>s</sub>	H <sub>E</sub>	h	π	S
COI	BR	20	19	19	0.99	0.0031	22
	KR	22	14	12.9	0.90	0.0024	18
	MR	20	15	15	0.96	0.0024	18
	NR	21	13	12.6	0.94	0.0022	15
All		83	45	14.8	0.95	0.0026	46

**SAMPLE ABSTRACT**

Figure 1. Discriminant analysis of principal components (DAPC) based on SNPs

Please submit your abstract through email by 30 July 2022

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## **Guidelines for poster presentation**

1. The poster should be A0 (84.1 cm width x 118.9 cm height) in size.
2. The poster should be a stand-alone visual representation of the submitted abstract.
3. Recommended font size is 48-60 point for headings and 24-32 point for content.
4. Figure should be in appropriate size with short and informative caption.
5. Hang the poster on 08.09.2022 evening at the space allocated (2<sup>nd</sup> floor of the Faculty of Fisheries). Gum, pin, clips etc. will be provided at the venue.
6. Look for poster number on the poster board. Poster presenter is expected to be available nearby the poster during the poster session.