

## **Enhancement of Genetic Diversity through Cross Breeding of Two Catfish (*Heteropneustes fossilis* and *Clarias batrachus*) in Bangladesh**

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**Abstract :** Two popular and highly valued fish, Stinging catfish (*Heteropneustes fossilis*) and Asian catfish (*Clarias batrachus*) are considered for observing genetic enhancement. Cross breeding was performed considering wild and farmed fish through inducing agent. Five RAPD markers were used to assess genetic diversity among parents and offspring of these two catfish for evaluating genetic enhancement in F1 generation. Considering different genetic data such as banding pattern of DNA, polymorphic loci, polymorphic information content (PIC), inter individual pair wise similarity, Nei genetic similarity, genetic distance, phylogenetic relationships, allele frequency, genotype frequency, intra locus gene diversity and average gene diversity of parents and offspring of these two fish were analyzed and finally in both cases higher genetic diversity was found in F1 generation than the parents.

**Keywords :** *Heteropneustes fossilis*, *Clarias batrachus*, cross breeding, genetic enhancement

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