

Stock discrimination of



High genetic variation is an important requirement for long term survival of wild populations through adaptations to changing environmental conditions. High levels of variability and the potential to isolate large number of loci make microsatellites the marker of choice to study intraspecific genetic variation in fish. Seventy *Sperata aor* samples each from four sites along the river Ganga were successfully cross amplified at six loci. All the selected loci were highly polymorphic showing a slight heterozygosity excess. The mean observed and expected heterozygosities across all investigated populations were 0.971 and 0.913, respectively. F_{ST} statistics, Bayesian model-based clustering analysis and analysis of molecular variance (AMOVA) revealed three different genetic stocks of *S. aor* (Narora–Kanpur, Varanasi and Bhagalpur), showing moderate genetic differentiation among them (total $F_{ST} = 0.069$). Genetic differentiation was significantly correlated with the distance among stocks. The populations of *S. aor* are currently stable in the river Ganga as evident from high levels of genetic variability and no inbreeding. However, a precautionary

approach to fishery management and conservation of *S. aor* should be undertaken at priority in view of the anthropogenic as well as natural threats to the fishes of river Ganga.

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