



Isolation and Characterization of Microsatellite Markers from the Malaria Vector *Anopheles Fluviatilis* Species T

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ABSTRACT: *Anopheles fluviatilis* James is an important malaria vector in India, Pakistan and Nepal. It has been now recognized as a complex of at least four sibling species, S, T, U and V, among which species T is most widely distributed species throughout India. They are distinguished on the basis of fixed paracentric inversions present on polytene chromosome arm 2 and 3. Chromosomal inversion +q¹+r¹ is the standard arrangement for species S, q¹+r¹ for species T, +q¹r¹ arrangement for species U, and a new inversion karyotype 2s¹; 3s is diagnostic for species V. The taxonomic status of these species is confusing owing to controversies prevailing in literature. In addition, chromosomal inversion genotypes, which were considered species-diagnostic for *An. fluviatilis* species T, are unreliable due to existence of polymorphism in some populations. In order to study the population level genetic diversity, we isolated and characterized 20 microsatellite markers from microsatellite-enriched genomic DNA library of *An. fluviatilis* T. Of these primers, 18 were polymorphic and 2 were monomorphic. The number of alleles per locus among polymorphic markers ranged from four to nineteen. This study provides a promising genetic tool for the population genetic analyses of *An. fluviatilis*. This will help in estimating the extent of gene flow between different populations. © 2014 iGlobal Research and Publishing Foundation. All rights reserved.

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