

# Seasonal Variation of Diversity and Habitat Preferences of Aquatic Insects along the Longitudinal Gradient of the Gadana River Basin, South-West Ghats (India)

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**Abstract:** Diversity and habitat preference of aquatic insects were studied in the Gadana River basin, South-West Ghats, South India, along its longitudinal gradient. We selected stream reaches corresponding to the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> orders. Samples were collected in triplicate from different substrates (sand, litter deposited in pool areas, litter held in riffle areas, and stones) during the three different sampling periods and are designated on the basis of the rain regime; July (south-west monsoon), October (north-east monsoon) and March (dry season). We identified 5,065 specimens corresponding to 50 taxa. The analysis of diversity numbers (genus level) indicated that all insect taxonomic orders had higher numbers on the 4<sup>th</sup> order stream reach. The highest richness and abundance were observed during the south-east monsoon (July). Considering habitat preference, litter in riffle areas had the highest faunal richness.

**Key words:** Diversity, longitudinal gradient, aquatic insects, tropical river.