ABSTRACT

The study was conducted in June and September 2011 in six rivers that drain Mt. Kenya and the Aberdare catchments, i.e. Honi, Naro Moru, Liki, Sirimon, Mariara and Karigu. The main objective was to determine the ecological status of these rivers and identify macroinvertebrates with potential applicability as biomonitors. South African Scoring System version 5 (SASS-5), Multimetric Index (i.e. MI; values ranging from 0 = poor to natural = 1) and the Qualitative Habitat Assessment (QHA) methods were used in this study. Values more than 80% indicate largely unmodified systems (class B and A) whilst values below 40% indicate largely modified systems (classes, D, E and F). Class C (moderately modified systems fall within 60 – 79%). The highest number (16) of macroinvertebrate taxa were recorded at the Naro Moru and Mariara Rivers, while the lowest (3) was recorded at Karigu River. Macroinvertebrate abundance differed significantly among the rivers (One-way ANOVA, ($F(5,135) = 3.533$, $p < 0.01$). Based on QHA, Naro Moru River could be categorized as management class B, while the rest of the studied rivers fall under management class C. On MI basis, Naro Moru, Liki and Sirimon Rivers were of good water quality (MI = > 0.6) while Honi and Mariara Rivers were of moderate water quality (MI = 0.4- 0.6). Monitoring with macroinvertebrates enabled identification of anthropogenically affected rivers and placement of the study sites in their respective management classes for future interventions.