ABSTRACT

The present study analysed soil macroinvertebrate communities in a broadleaf stand and a pine stand in the western Himalayas. Macroinvertebrates were sampled at monthly intervals (February-July) using a hand sorting extraction method from soil monoliths of 25×25×30 cm. They were identified up to species level for earthworms and major taxonomic groups for others. Results showed that the macroinvertebrate communities composed of arthropods and earthworms, the former being numerically more dominant. Species diversity indices and rank abundance were used for comparing faunal diversity. Broadleaf stand had higher species diversity index ($H'$) and evenness index (J) than the pine stand which were related to heterogeneity of the system and abiotic factors like pH, organic carbon and available phosphorous content. Earthworm communities were entirely composed of exotic and Indian peregrine taxa indicating severe impact of anthropogenic activities in the landscape. *Dichogaster saliens*, an exotic earthworm species of Ethiopian origin, is being reported for the first time from western Himalaya. The number of earthworm species varied among two systems; they were higher (n=6) in broadleaf stand than in pine stand (n=2). Age structure of earthworms indicated that proportions of combined juvenile and immature worms were higher in broadleaf stand than in pine stand, indicating population growth in the former. Data on the vertical distribution of macroinvertebrates, earthworms in particular, showed concentration of population in top most soil layers.