**Abstract**

Freshwater ecosystem and their biodiversity are the least understood and often overlooked component of global conservation. This study provides the first comprehensive account of the fish diversity of the rivers in the Wayanad hills to inform future conservation and management plans. A combination of methods including extensive field surveys, local ecological knowledge and geospatial threat mapping were done during the year 2013-2018. There were 76 species represented by 10 orders, 23 families and 54 genera. Sixty-four species are native species out of which 35 are endemic to Western Ghats, 6 endemic to Kerala and 3 endemic to Wayanad hills. Ten species comes under threatened, 4 critically endangered, 4 endangered, 2 vulnerable and 2 data deficient category on the IUCN red list. The major threats were pollution, overexploitation, urban development and alien invasive species. The generation of a species checklist and threat maps together with information on the need for policies will help bridge the knowledge gap regarding the ichthyofauna of a biodiversity-rich region of the Southern Western Ghats.