

Species Richness and Endemism of Herpetofauna in Kapatagan Watershed, Philippines

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Abstract

Due to the increasing threats in Kapatagan Watershed, the local government declared that the area is in a critical state. Herpetofauna is a good bioindicator of the watershed health but it is poorly known in the area. Hence, a study of the species richness and endemism of herpetofauna in Kapatagan Watershed was conducted. Field sampling for amphibians and reptiles in upland, riverine, lowland, and mangrove areas in the watershed ecosystem using the visual encounter and cruising methods resulted in records documenting the occurrence of 30 herpetofauna species composed of 11 amphibians and 19 reptiles. Fourteen (47%) of the total number of herpetofauna species are Philippine endemic. Five species that are classified as “Vulnerable” to extinction were documented including the two endemic amphibians, *Megophrys stejnegeri* and *Rhacophorus bimaculatus*, and the two endemic reptiles, *Hydrosaurus pustulatus* and *Tropidonophis dendrophiops*. Forested sites in upland areas had the highest species richness ($N = 26$) and calculated species diversity ($H' = 1.271$), while the rice fields in lowland had the lowest values. Hunting for human subsistence and land conversion are human-related threats to the herpetofauna in the watershed. The presence of threatened endemic species indicates the need to protect the Kapatagan Watershed as an important habitat resource for herpetofaunal populations.

Keywords: amphibians, bioindicator, ecosystem, reptiles, vulnerable