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Species richness and diversity of amphibians of the Giritale nature reserve of North-Central province, Sri Lanka

M G T H Abayaratna^{1*} and W A D Mahaulpatha²

¹Rajarata University of Sri Lanka, Mihintale

²University of Sri Jayewardenepura, Nugegoda

A study on amphibian diversity and evenness of the Giritale nature reserve of North Central Sri Lanka was conducted from May 2006 to April 2008. Four habitat types, namely, grasslands, paddy fields, forests and human habitats were identified using digital maps. Amphibians in each habitat type were recorded using three quadrates (10mx10m). When trees were present inside the quadrate trunk and branches were checked for arboreal species. Amphibian species richness (S) and Shannon-Weiner Diversity Index of species diversity {H'} were calculated. Four hundred and thirty one amphibians belonging to the three families Bufonidae, Microhylidae and Ranidae were recorded. A total of ten species were recorded, they were Atukorale's Toad (*Bufo atukoralei*), Common Toad (*Bufo melanostictus*), Sri Lankan bullfrog (*Kaloula taprobanica*), Ornate narrow mouthed frog (*Microhyla ornata*), Indian skipper frog (*Euphlyctis cyanophlyctis*), Common paddy field frog (*Fejervarya limnocharis*), Jordon's bullfrog (*Hoplobatrachus crassus*), Sri Lanka Wood frog (*Rana gracilis*), Polonnaruwa shrub frog (*Philautus regius*) and Spotted tree frog (*Polypedates maculatus*). Of these three species, Atukorale's frog (*Bufo atukoralei*), Sri Lankan wood frog (*Rana gracilis*) and Polonnaruwa shrub frog (*Philautus regius*) are endemic. The total abundance was highest in the paddy fields with 5.0±0.0 (Mean±SD) individuals and the lowest was in the human habitations with 3.70±2.56 (Mean±SD) individuals. Highest diversity index (H') of 2.87 was recorded in the paddy fields while forest had the lowest diversity index of 1.24. Highest species richness of 07 was recorded in the human habitats. Lowest species richness of 03 was observed in the forests and paddy fields. Shannon Weiner evenness (J) was highest in the paddy fields (J=1.6) and was lowest in the forest habitat (J=1.13). Common paddy field frog (*Fejervarya limnocharis*) was the most abundant while ornate narrow mouthed frog (*Microhyla ornata*) was the least abundant amphibian species. The base line data on diversity and richness obtained during this study could later be used in conservation status assessments.

*theja112@yahoo.com

Tel: 060-2374984