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**DIVERSITY OF THE GROUND LIVING AMPHIBIAN FAUNA IN
THE CAMPUS OF THE UNIVERSITY OF PERADENIYA,
SRI LANKA**

A PROJECT REPORT PRESENTED BY

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**THE DIVERSITY OF THE GROUND LIVING AMPHIBIAN FAUNA IN THE
CAMPUS OF THE UNIVERSITY OF PERADENIYA, SRI LANKA**

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Abstract

A field survey was conducted from January 2003 to August 2003 on the ground living amphibian (Order Anura) fauna of the campus of the University of Peradeniya in order to prepare the species inventory and to estimate the diversity parameters. The study was confined to University Park and the lower Hantana region (below 800m contour line). Thirty sampling sites (with minimum distance between two adjacent sites) were selected to represent all the habitat types (corresponding to predominant vegetation) present in the study area. Number of sample stations selected in each habitat type was proportionate to the total land area available in each habitat type.

A combination of visual encounter survey method and line transect method (area and time constrained) were used to determine the diversity of amphibian species at sample sites. Sampling was carried out during night time (1800 – 2400hours) with the aid of spotlights of 100 000 candle power by two trained enumerators. Habitat types present in the 30 sample sites were categorized in to 12 different habitat categories based on the floral diversity exists and the physical features of terrain. Analyses were carried out using program “Biodiversity Professionals version 2”.

The present study revealed the presence of a total of fourteen ground-dwelling anuran species including one unidentified species in the study area. Of the recorded species five species are endemic to the country. Highest diversity among the recorded species occurs within the Subfamily Rhacophorinae. Unidentified species belongs to the Subfamily

Rhacophorinae according to the morphological features. However further studies are required to establish the taxonomy and to study the ecology of this species.

The habitat categories GRL4 and DWA had the highest diversity of anuran species (12 species in each habitat category) whereas habitat type SP had the lowest (03species). The study revealed that the most common species of Anuran in the University of Peradeniya were in decreasing order of *Philautus species*, *Bufo melonostictus*, *Rana temporalis*, *Lankanectus corrugatus*, *Fejervarya limnocharis* and *Polypedates cruciger*.

Margeleff index M base 10 indicates occurrence of highest and lowest anuran diversity in habitat categories GRL4 and SPR respectively. Maximum Shannon diversity was seen in GRL 4 with an index value of 1.079 whereas the lowest of the same was found from habitat category SP with the index value of 0.477. Shannon evenness was highest in GRL 2 with an index value of 0.843 while the lowest Shannon evenness was reported from SCR with the index value of 0.617. According to Berger-Parker index, habitat category DWA had the lowest dominance and hence the highest evenness. Scattered Pine (SC) habitat category had highest dominance and hence lowest evenness. Jaccard qualitative distance measure (presence / absence) revealed a dendogram with highest similarity between GRL4 and DWA while SP shows least similarity to all other habitat categories. The distribution of *Fejervarya keerthisinghe*, *Polypadeatus maculatus* and, *Rhacophorus macropus* were random while all other species recorded had aggregated distribution.