

Role of Anurans in the croplands of Jaffna area

*¹Kowshika, J. N. and ^{*1}Sivaruban, A.*

¹Department of Zoology, University of Jaffna, Jaffna, Sri Lanka
**abyerami@gmail.com*

Anura is one of the Orders of Class Amphibia in which frogs and toads are included. Thirteen species of anurans already have been reported in Jaffna area. However there are no records of dietary information of anurans in the Jaffna Peninsula; therefore this study was conducted to investigate the diets of anurans with the specific objective of documentation of stomach contents of anurans in order to compile a profile of data on the dietary information with respect to anuran species. Samplings were done in home gardens, vegetable gardens and paddy fields located in Nallur DS division of the Jaffna district. Frogs and toads were collected once a week manually in late evening from 1800 to 2000 hrs and early morning from 0530 to 0730 hrs. Each habitat was visited 12 times from July to December 2015. After every collection, measurements were taken, stomach flushing was applied and then the animal was released back to the same site. The species were identified based on the photographs and morphological feature by using keys and guides. The data were entered in Microsoft Excel for further analysis. During the study period, a total of 104 adult frog and toad were collected and they belong to 4 families and 12 species; among these 9 (75%) were encountered during the dry period and all 12 species were encountered in the rainy days. Out of 104 collected anurans only 76 individuals were eligible for stomach content analysis. The analysis revealed a total of 26 different preys grouped in nine major categories namely insecta, annelida, arachnida, mollusca, diplopoda, chilopoda, other invertebrates, vertebrates and plant parts. On average insects were proportionately dominating (67.8%) over other prey items. The insect preys composed of 8 orders namely Diptera, Hemiptera, Orthoptera, Blattoidea and Lepidoptera, Hymenoptera, Isoptera and Coleoptera. It can be concluded that anurans can be considered as a natural enemy in suppressing the insect population in the croplands of Jaffna area. However it was noted that these anurans habitats are usually affected by dangerous chemicals which are applied to control pests.

Keywords: Anurans, Croplands, Natural enemies, Insects.