(120)

Seasonal Population Distribution of *Otocryptis weigmanni* Wagler, 1830 (Reptilia: Agamidae) in Yagirala Forest Reserve, Sri Lanka

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Abstract

Otocryptis weigmanni is one of the most widely distributed endemic agamid lizard found in wet zone of Sri Lanka. Present study evaluated its seasonal fluctuation and population distribution in the Yagirala Forest Reserve from January to December, 2014. Visual encounter surveys were done along three linear transects of 200 m. Transacts were distributed across three habitat types, namely natural forest habitat, degraded forest habitat and riverine forest habitat. All ,transects were surveyed in four climate seasons namely north-east monsoon season (NEM), first inter-monsoon season (FIM), south-west monsoon season (SWM) and second inter-monsoon season (SIM). Ambient temperature, relative humidity, canopy cover and leaf litter moisture content were measured in each transect and the monthly total rain fall data was obtained. *O. wiegmanni* were categorised into three discrete age classes as adult males, adult females and juveniles based on approximate lengths, wet weight, coloration and obvious secondary sexual characteristics. Relatively dry NEM supported the highest population density of 0.04±0.02 lizards/m^2. Incidentally, highest number of juveniles was recorded during NEM. Therefore, the NEM may be the breeding season of this species. During the SWM the forest was relatively wet and the forest had the lowest population density of 0.022±0.010 lizards/m^2. *O. wiegmanni* preferred the degraded forest habitat over the natural forest habitat and riverine forest habitat in all four climate seasons. Population density was highest in degraded forest habitat with 0.027±0.020 lizards/m^2 and population density was lowest in natural forest habitat with 0.007 ±0.006 lizards/m^2. The low canopy cover in the degraded forests allowed sunlight to reach forest floor which offered better basking places for the lizards which may have contributed to increase in their numbers in the degraded forests. Therefore fluctuation of habitat variables throughout the year and among habitats influenced the seasonal fluctuation and population distribution of *O. wiegmanni*.

Keywords: Yagirala, Endemic, *Otocryptis weigmanni*