Asian Journal of Conservation Biology, July 2023. Vol. 12 No. 1, pp. 42–53 AJCB: FP0209/74112
ISSN 2278-7666 ©TCRP Foundation 2023 https://doi.org/10.53562/ajcb.74112

Research Article

Eco-ethological attributes of the Indian Giant Squirrel *Ratufa indica* in Kuldiha Wildlife Sanctuary, Odisha, India

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(Received: February 25, 2022; Revised: January 12, 2023; Accepted: January 27, 2023)

ABSTRACT

Present three year-long (2016 to 2019) study deals with the spatio-temporal distribution pattern of *Ratufa indica*, the endemic giant squirrel of India inhabiting Kuldiha Wildlife Sanctuary. The dietary preferences, behavioural attributes including different reproductive aspects and effect of forest phenology on breeding cycle of the species were documented. Results depicted that sighting frequency (23±0.7 per hour) of this canopy dweller was highest during pre-monsoon morning near forest personnel's residence (Site I). In monsoon and post-monsoon, they preferred to inhabit the denser parts of the forest (Sites II and III). Maximum occurrence and activities were observed at upper canopy layer (56%) during pre-monsoon, whereas, during late monsoon and early post-monsoon, they were observed to come down more frequently to the ground level (27% and 17% respectively). Forest phenology was noted to synchronize with the breeding cycle of this frugivorous rodent. Reproductive cycle was observed to be biannual via two breeding phases: the pre-monsoon and the post-monsoon; with the attainment of maximum litter size (3) during the former. Being an effective functional operator of forest ecology, maintenance of canopy contiguity coupled with the presence of juicy fruit-bearing plants turned out to be essential for this flagship animal's conservation strategy against the prevailing threat factors.

Key words: Giant Squirrel, Habitat preference, Breeding, Feeding, Canopy contiguity, Conservation