

Observation of road kills on Kambam-Kumily Road (NH 220) in Tamil Nadu

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ABSTRACT

The observation of road kills made from July 2007 to August 2007 along the NH 220 in Kambam Kumily road which is passing through the forest nearby Periyar Wildlife Sanctuary. Totally 50 kills were recorded (0.52/km) in which herpetofaunal contributing highest in numbers. In management aspects this observations will provide baseline information for future studies.

Keywords: NH220, Road kills, Vertebrates

INTRODUCTION

Roads are creating a barrier to wildlife movement and changing the habitat in the road verges and increasing the threat of biological communities and also perform as physical barrier to change the animal movements and behaviours (Daveley and Stouffer 2001), Many works has been dealing with mortality of animals along the roadways (Knobloch 1939; Haugen 1944; McClure 1951; Hodson 1966; Evenden 1971; Bellis & Graves 1971). In India very few short term studies emphasising the importance of road mortalities (Gokula 1997 ; Vijayakumar et al., 2001; Gopi Sunder,2004; Das et al., 2007; Seshadri et al., 2009; Baskaran & Boominathan, 2010) having bulky highway networks inside the Wildlife habitats. The direct or indirect impact of these roads on wild fauna has received very little attention in the country (Gopi Sunder 2004). Number of vehicles and increasing road in wildlife habitat growing concern among conservationist and managers. The observation of road kill was carried out at NH 220 passes near Periyar National Park at Thekkady in Kerala with Theni in Tamil Nadu. The main reason to investigate this road (NH220) was the high traffic intensity due to the tourist and sabarimala pilgrimage which is not quantified so this study will give baseline information on road mortalities for future studies.

STUDY AREA

The observations made in NH220 which is passing from the border of Kerala (Kumily) and Tamil Nadu (Lower camp). The Exact locations of the observation was Vandanmedu (9° 39' 36.24"N, 77° 11 43.4) to near Lower Camp (9° 36' 39.1"N, 77° 10' 16.8" E). The length of the study road was 6km passing through semi evergreen and evergreen forests which is contiguous with Periyar Wildlife Sanctuary. The major trees along the road was *Erythrina stricta*, *Leea indica*, *Knema attenuata*, *Listea wightiana*, *Terminali paniculata*, *Stereospermum xylocarpum*. This area is rich in flora and fauna due to the availability of water throughout the year which is releasing from Mullai Periyar dam for irrigation.

METHODS

The road kills were recorded weekly twice between July 2007 to August 2007 by vehicle. To avoid the repetition old kills were removed from the road once they have recorded. Kills were identified by reference books (Grimmett, et al., 1999; Daniels 2002). We have not collected any specimen from the area.

RESULT

During the study of a total 50 kills which included Amphibians 15, Reptiles 21, Birds 9 and Mammals 5. The encounter rate of all the kills were 0.52/km composed of Amphibians 0.66 / km Reptiles 0.22 / km Birds 0.09 / km and Mammals 0.05 / km.

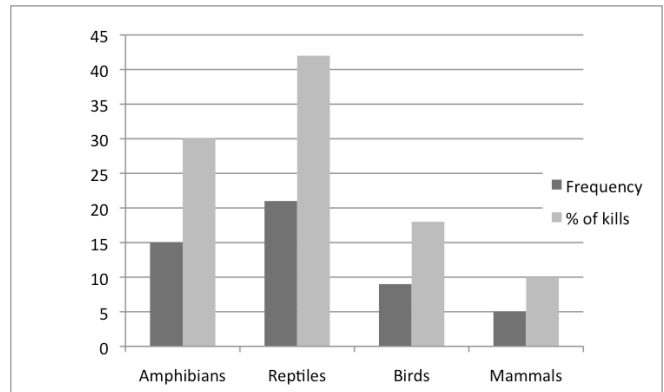
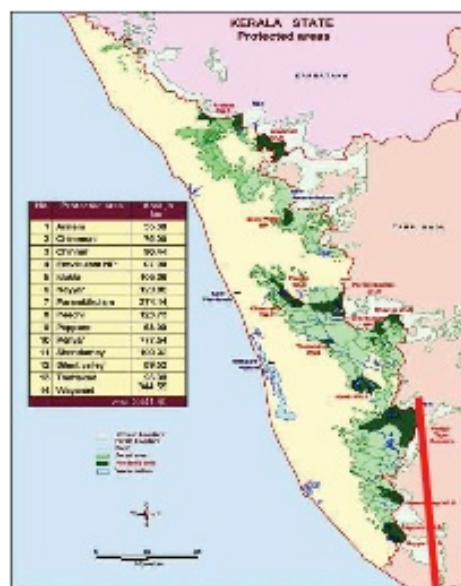


Figure 1. Frequency and Percentage of road kills



Location map indicating the study area and zoomed in images of forest

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DISCUSSION

This observation of road kills shows minimum 25 species removing from this small area in a month. Since this observation made in monsoon season high rate of herpeto faunal mortality has been recorded. Except mammal, most of the kills were observed in July than in August out of 50 kills, half of the kills were Reptiles especially snakes because snakes often use roads for its thermo regulation. Macaque and common Langur often got killed, since they come to road to beg from tourists. This small observation shows the importance of monitoring this road to avoid the collision of animals by vehicles. Though we have not encountered any large mammals it is important to take necessary steps for the conservation of wildlife in this road pass.

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Table 1. Observation of road kills on NH 220 in 6 km stretch

Species name	Common name	No. of kills
Amphibians		
Common Indian Toad	<i>Duttaphrynus melanostictus</i>	6
Unidentified Frog	-	4
Unidentified caecilian	-	5
Reptiles		
Russell's Viper	<i>Daboia russelii</i>	1
Unidentified viper species		1
Common Wolf Snake	<i>Lycodon aulicus</i>	3
Checkered Keel back Snake	<i>Xenochrophis piscator</i>	2
Variegated Kukri Snake	<i>Oligodon taeniolatus</i>	1
Green Keel Back Snake	<i>Macropisthodon plumbicolor</i>	1
Common Cat Snake	<i>Boiga trigonata</i>	1
Common Skink	<i>Eutropis carinata</i>	3
Common Worm Snake	<i>Ramphotyphlops braminus</i>	1
Red sand boa	<i>Eryx johnii</i>	1
Buff-striped Keel Back	<i>Amphiesma stolatum</i>	1
Common Garden Lizard	<i>Calotes versicolor</i>	4
Monitor lizard	<i>Monitor salvator</i>	1
Birds		
Jungle owlet	<i>Glaucidium radiatum</i>	1
Indian roller	<i>Coracias benghalensis</i>	1
Common Indian Nightjar	<i>Caprimulgus asiaticus</i>	1
Indian Myna	<i>Acridotheres tristis</i>	1
Spotted Dove	<i>Streptopelia chinensis</i>	2
Emerald Dove	<i>Chalcophaps indica</i>	1
Unidentified Bird	-	1
Unidentified Cuckoo sp.	-	1
Mammals		
Common Langur	<i>Semnopithecus entellus</i>	1
Bonnet Macaque	<i>Macaca radiata</i>	2
Brown palm civet	<i>Paradoxurus jerdoni</i>	1
Three striped squirrel	<i>Funambulus palmarum</i>	1
		50

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