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## Survey Study on Road Kill Animals Around Murtizapur Tahsil

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### Abstract:

Road kill it's an everyday reality for those who drive, especially long distances on country roads. It's the collateral damage of the road trip. And it's a sign of the times, a symbol of how we live, the things we can't change, the fast pace of modern life and the way we treat the rest of the world.

Road kill refers to the mortality of animals, such as reptiles, caused by being hit by vehicles on roads, often influenced by factors like habitat preference, seasonal activities, and landscape features.

The study indicates the exposure of the slither, nocturnal animals on the road. This is particularly factual of the Amphibians, Reptiles & Mammals. The findings have administration implication mainly in the come around of the vulnerable standing of some of the variety. It is apparent that the drivers do not give much importance to these groups may be because of the lack of sighting of these on the road. The awareness among the road kill may avoid by caution in driving vehicles on the roads.

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**Keywords:** Road kill, Mortality, Vehicles, Animals, Driving

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### Introduction:

Road kill it's an everyday reality for those who drive, especially long distances on country roads. It's the collateral damage of the road trip. And it's a sign of the times, a symbol of how we live, the things we can't change, the fast pace of modern life and the way we treat the rest of the world.

Road kill refers to the mortality of animals, such as reptiles, caused by being hit by vehicles on roads, often influenced by factors like habitat preference, seasonal activities, and landscape features.

Here are four more ways that road kill can help recognition of variety:

- Feeding Other Animals. When an animal is killed by a car, it may be scavenged by predators, or picked up

by a government service such as sanitation or animal control.

- The Body Farm.
- To Prevent More Road kill.
- To Capture Predators for Research.

**Habitat loss:** Construction of roads and railroads always implies a net loss of wildlife habitat. The physical encroachment on the land gives rise to disturbance and barrier effects that contribute to the overall habitat fragmentation due to infrastructure.

**Disturbance:** Roads, railroads and traffic disturb and pollute the physical, chemical and biological environment and consequently alter habitat suitability for many plant and animal species for a much wider zone than the width of the road or railroad itself.

**Corridor:** Road verges and roadsides can however provide refuges, new habitats or serve as movement corridors for wildlife. These beneficial effects of infrastructure are a major challenge to planners and biologists as management and design must be adapted to a wider landscape context. Mortality: Traffic causes the death of many animals that utilize verge habitats or try to cross the road or railroad.

**Barrier:** For most non-flying terrestrial animals, infrastructure implies movement barriers that restrict the animals' range, make habitats inaccessible and can finally lead to an isolation of populations. The barrier effect is the most prominent factor in the overall fragmentation caused by infrastructure.

**Road kill observation projects:** In India, the project "Provide Animals Safe Transit on Highways" (PATH) was initiated by the Environment Conservation Group in 2015, to study the impact of roads on Indian wildlife. A team of five wildlife conservationists had undertaken a 44 day expedition, travelling more than 17,000 km across 22 states to study and spread awareness on road kill. It is also gathering data on its website, and social media platforms. More focused scientific studies on impacts of traffic on animals have been conducted across India especially in the Western Ghats of south India documenting a large number of species of insects, other arthropods, amphibians, reptiles, birds and mammals killed. Another study conducted on 420 km of roads located along cultivated fields in Punjab showed granivorous birds to be killed far more than their availability, likely attracted to spilled grain on the roads.

The study of road kill has proven highly amenable to the application of citizen science observation methods. Since 2009, state-wide road kill observation systems have been started in the US, enrolling hundreds of observers in reporting road kill on a website. Roads can have genetic effects

by acting as a barrier and decreasing genetic diversity (Coffin 2007) Furthermore, the presence of roads, and the intensity of their use, can result in behavioral changes of individuals and species (Mumme *et al.*, 2000) In the United Kingdom, "The Road Lab" (formerly Project Splatter) was started by Cardiff University in 2012, with the aim of estimating the impact of roads and motoring on British wildlife.

Based on one year long observations, he recorded 439 casualties, which included amphibians, reptiles, birds and mammals. (Gokula, 1997) reported mortality in snakes due to highway traffic in the dry deciduous forests of Mudumalai Wildlife Sanctuary, Tamil Nadu. (Kumar and Saikia 2000) reported road kills in Indira Gandhi Wildlife Sanctuary. A month long study by (Vijayakumar *et al.*, 2001) reported mortality of herpetofauna from the highway segments passing through rainforest fragments and tea gardens in the Anamalai hills, where more amphibians were killed. Seventy three reptiles were seen killed against 311 amphibians. Chhangani (2004) recorded 228 birds of 32 species in the highways passing through Kumbhalgarh Wildlife Sanctuary in Rajasthan. (Das *et al.*, 2007) reported the reptile mortality along the NH 37 passing adjacent to Kaziranga National Park. The five month long study recorded 68 instances of road kills. The four day survey of amphibian mortality on roads in the Sharavathi river basin recorded 144 individuals of 13 species (Seshadri *et al.*, 2009).

#### **Material and Methods:**

The Murtizapur Tahsil road passing through konkanwadi was sampled from January to February 2025. A stretch of 13.16 km of the road were systematically surveyed in the early morning hours. A reconnaissance of the road on foot covering different time periods of the day indicated lack of road kills during day time. Only on

two occasions, one of Bonnet Macaque and another of a turtle, kills were seen during day time. Hence the time between 06:30 to 09:30 was selected for observation so that the entire stretch could be covered within three hours. The entire road was surveyed in continuous days within a month. The number of days covered in different months is given in Figure . Opportunistic encounter of kills were also recorded. On three occasions, information provided by reliable persons was also considered.

The sighted road kills were recorded along with habitat and status of the specimen. The kills were photographed separately and with the surrounding habitat. The locations of kills were recorded using GPS photographs.

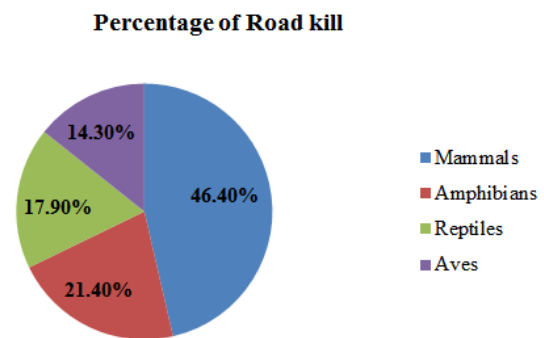
### Observations and Results:

The length of the road selected for observations was 13 km. One hundred sixty days spread over eight months were spent in the field recording the kills observed. The number of days varied at February 2025.

A total of 16 road kills were recorded during the January to February 2025 of these, 3 kills were of amphibians. The reptiles accounted for 4 numbers and mammals 7 numbers. Bird kills were only 2. The species recorded as road kills, reptiles formed about 17.9%, mammals 46.4%, amphibians 21.4% and birds about 14.3%. The monthly distribution of animal kills observed during the period.

Among the amphibian kills recorded, the highest number was that of Common Indian Toad, (*Duttaphrynus melanostictus*) followed by Bi-colored Frog, (*Clinotarsus curtipes*). Other amphibian kills include

Indian Bull Frog, (*Hoplobatrachus tigerinus*), etc.



**Fig. 1- Percentage of different groups of animals among road kills recorded around Murtizapur Tahsil Road.**

The study was conducted around the Murtizapur Tahsil area. During the survey and documentation of study site were conducted at the 3rd week of February 2025. In Murtizapur Taluka 20.7363053 latitude and 77.3548647 longitude. Akola district has typical Tropical Climate .It show various habitats like grassland, crubland, tropical dry deciduous forest and wetland etc. we are covering approximately 60km in this 06 area in Murtizapur, all observations were carried out between morning 6:30 hrs to 09:30 hrs afternoon to evening time 17:30 hrs to 19:30 hrs in good weathered condition. During each study site was visited at least 3 to 4 times in a week. The photographs of collected specimens were taken by digital camera.

Murtizapur is a city located in the Akola District of Maharashtra state India. It belongs to Vidhrbha region of the Amravati Division. A total 16 road kill animals were collected out of which 7 species are mammals, 4 species are reptiles, 2 species are birds and 3 species are amphibians.

**Table 1. The details of animal Road kills observed during January to February 2025 around Murtizapur Tahsil Road.**

Sr. No.	Name of the areas	No. of Road kill animals
1	Konkanwadi	4
2	Gram sevak colony	2
3	Hirpur road	3
4	Daryapur road	2
5	Old city	4
6	Tanga chauk	1

### Conclusion:

The study indicates the vulnerability of the smaller, nocturnal animals on the road. This is especially true of the amphibians and reptiles. The findings have management implications especially in the wake of the threatened status of some of the species. It is evident that the drivers do not give much importance to these groups may be because of the lack of sighting of these on the road. It will be good if a briefing is done for the information of the drivers. It is also suggested that speed breakers are established at vulnerable points like the turnings and areas with water holes. Canopy connectivity may have to be maintained or established through planting of appropriate species along the road sides, wherever it is required. Artificial canopy bridges may help till such permanent solutions are in place.

“Mitigation measures is only the solution to avoid wildlife road kills”, and eventually accumulate the Biodiversity of animals in due course stability the environment.

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