

# CHAMELEON CONSERVATION AT KANHA SHANTI VANAM: MONITORING JUVENILE POPULATIONS FOR ECOLOGICAL INSIGHTS AT KANHA SHANTI VANAM, HYDERABAD

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## ABSTRACT

The Indian chameleon (*Chamaeleo zeylanicus*) is a fascinating reptile native to South Asia, including India, Sri Lanka, and Pakistan. Its well-known ability to change color is primarily used for communication, temperature regulation, and signaling mood, rather than just camouflage. These chameleons are typically found in forests, scrublands, and even human settlements where trees and bushes are present. Arboreal by nature, they spend most of their time in trees and bushes. Although the species is currently listed as "Least Concern," habitat destruction and deforestation pose significant threats to its population.

Females lay clutches of 10 to 30 eggs during winter in burrows that they dig into the soil. According to Whitaker (1978), the incubation period for eggs in captivity is about 81 days. However, other studies by Trench (1912), Singh, *et al.*, (1984), and Aengals (1990) suggest an incubation period of 6 to 7 months. Recent observations at Kanha Shantivanam (KSV) Hyderabad, provide new insights into the breeding season of this species.

The conservation of chameleons, specifically in regions like (KSV) in Hyderabad, Telangana, is an integral part of maintaining biodiversity and ecological balance. KSV, located on the Deccan Plateau and home to a diverse range of species, provides a unique habitat for these reptiles, especially in its indigenous vegetation and protected environments.

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## NOTABLE OBSERVATIONS

During July, August, and September 2024, several juvenile Indian chameleons were observed within the Kanha Shantivanam campus. This period aligns with the post-breeding season observed by Singh *et al.*, (1984), providing valuable insights into successful breeding and territory establishment in this region.

Juvenile chameleons, ranging from 3 to 7 inches in length, were sighted in various parts of the habitat, with frequent sightings of adult chameleons as well. A total of 12 sightings of

juveniles were recorded between July and September 2024, most measuring around 4 to 7 inches in length. The presence of young individuals in different stages of growth suggests an active breeding population and favorable environmental conditions for their survival.

Hatchlings, which are independent from birth, are miniature versions of adult chameleons. They begin hunting for small insects, such as crickets and grasshoppers, immediately after hatching. Their diet primarily consists of small invertebrates.

## ROADKILL INCIDENTS

Unfortunately, several instances of young chameleons being killed on nearby roads were recorded. This highlights the need for increased awareness and protective measures around the habitat to ensure the safety of these reptiles. Due to their slow and deliberate movements, rough road surfaces impede their locomotion. Additionally, their tendency to move both forward and backward, combined with poor visibility due to their camouflage, increases their vulnerability to roadkill incidents (Rathinasabapathy *et al.*, 2009).



**Figure 1. Juvenile chameleon at Kanha Shantivanam (KSV)**



**Figure 2. Road kills of Juvenile chameleons**

## HABITAT SIGNIFICANCE

The sightings of both adult and juvenile chameleons suggest that Kanha Shantivanam offers an ideal habitat for the Indian chameleon. The vegetation, climate, and overall ecosystem appear to support their breeding, growth, and territorial behavior, making this location crucial for their conservation.

Indian chameleons are particularly at risk from road crossings due to their slow movements and reliance on camouflage, which makes them difficult for motorists to detect. Roads pose challenges to their movement and contribute significantly to mortality rates in areas where roads intersect with their habitats.

### Precautions for Kanha Residents and Visitors to Protect Reptiles

1. Stay on Designated Paths: Use marked trails to avoid disturbing hidden reptiles.
2. Avoid Disturbing Leaf Litter and Underbrush: Reptiles often camouflage in these areas. Be mindful not to disturb them.

3. Drive Slowly: Reptiles may cross roads, especially during mornings and evenings. Slow driving helps prevent accidents.
4. Educate Others: Teach children and newcomers about respecting wildlife.
5. Time Observations: Chameleons are active during the day. Observe them in the mornings or late afternoons. These steps protect Kanha's reptiles and help preserve their natural habitat.

## CONCLUSION

The presence of both young and adult chameleons at Kanha Shantivanam, as well as the unfortunate roadkill incidents, underscores the importance of habitat preservation and the need for protective measures. To ensure the continued success of the chameleon population, it is essential to reduce threats by raising awareness among motorists, installing speed breakers, and placing wildlife crossing signs in areas inhabited by chameleons and other slow-moving animals.

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