



Youngest leopard cub ever documented in a tree hole with mother at Yala National Park, Sri Lanka: a rare sighting

Gotabhaya Ranasinghe^{*1}, Krishan Sudasinghe², Rodney Hunukumbura³, Kaveesha Perera¹, Dushyantha Silva⁴, Milinda Wattegedara⁴

¹Institute of Cardiology, National Hospital of Sri Lanka, Colombo 10, Sri Lanka

ORCID: <https://orcid.org/0000-0002-9339-5368>

ORCID: <https://orcid.org/0009-0005-6865-4734>

²Leopard Trails Pvt Ltd, Colombo 07, Sri Lanka

³The Searle Company Ltd, Colombo 05, Sri Lanka

⁴Yala Leopard Center, Yala National Park, Hambanthota, Sri Lanka

ORCID: <https://orcid.org/0000-0002-3541-6722>

*Email: gotabhayar@gmail.com

Received: 27 August 2025 / Revised: 09 November 2025/ Accepted: 11 November 2025/ Published online: 06 December 2025.

How to cite: Ranasinghe, G., Sudasinghe, K., Hunukumbura, R., Perera, K., Silva, D., & Wattegedara, M. (2025). Youngest leopard cub ever documented in a tree hole with mother at Yala National Park, Sri Lanka: A rare sighting. Scientific Reports in Life Sciences 6(4), 109-114. DOI: <https://doi.org/10.5281/zenodo.17840299>

Abstract

The Sri Lankan leopard (*Panthera pardus kotiya*) occupies a wide range of habitats across the island, yet sightings of very young cubs in the wild are exceptionally uncommon. This report describes an extraordinary observation of a newborn cub with its mother inside a tree cavity in Yala National Park, Sri Lanka. On April 7, 2023, a female leopard was seen caring for a cub estimated to be under 10 days old, resting in a hollow located roughly 4.5 meters above the ground. High-quality photographs documented the mother nursing, grooming, and calmly guarding her offspring, offering a rare glimpse into early maternal behavior and den-site selection. A subsequent sighting in 2024 confirmed that the cub had survived and matured, indicating successful early development. This unusual observation enriches current knowledge of leopard reproductive behavior and highlights the importance of continued conservation efforts to safeguard this vulnerable subspecies within its natural habitats.

Keywords: Panthera Pardus, Conservation, Wildlife, Observation

Introduction

The *Panthera pardus kotiya*, commonly known as the Sri Lankan leopard, is a subspecies of the *Panthera pardus* family (Miththapala et al., 1996). It is considered Sri Lanka's apex predator, inhabiting the country's montane, sub-montane, tropical rainforests, monsoonal, dry evergreen forests, and arid zone scrublands (Wattegedera et al., 2022). The Sri Lankan leopard's habitat preferences are primarily confined to the island's dense forests, where it finds refuge, food, and suitable breeding grounds. The pristine ecosystems within the island provide essential resources for hunting and reproduction (Miththapala et al., 1996). However, the encroachment of human activities, such as deforestation, agriculture, and urbanization, has led to the fragmentation and degradation of its habitat, labelling the Sri Lankan leopard as a 'vulnerable' species on the IUCN Red List (Kittle et al., 2019). In the following report, we document the rare sighting of a newborn leopard cub nestled in a tree hole alongside its mother. While previous records in Sri Lanka have documented young leopard cubs via camera traps and remote observations, there are no reports of a neonate cub sighting in the open and visible from a vehicle. Understanding early-life stages of leopards, including how mothers care for their young, is crucial for gaining deeper insights into the species' reproductive strategies and survival rates, which in turn influence overall population dynamics. Therefore, this observation offers valuable insights into the secretive and elusive behavior of leopards, shedding light on their breeding patterns and habitat preferences.

Material and methods

All observations occurred during a regular wildlife tour undertaken by visitors. The sighting was reported on the 7th of April 2023 during the safari routine of the Yala National Park. The survey team for this observation comprised experienced wildlife rangers with in-depth knowledge of the habitat. The team used a four-wheel-drive (4WD) vehicle to navigate the terrains of the park. In addition, the team was equipped with binoculars and a high-powered spotting scope, which were used to provide greater visual clarity for identifying wildlife at a considerable distance. The survey took place during optimal wildlife viewing hours, with careful attention to minimizing noise and disruption to the environment. The leopards of Yala National Park are being identified using the Multi Point Leopard Identification Method on an ongoing basis since 2013 (Wattegedera et al., 2022). The multi-point leopard identification method considers the changes that occur to the form and shape of the spots and rosettes of a leopard and recommends that nine

out of the sixteen segregations of a leopard's skin coat are matched when identifying a leopard. Movement and rustling were noticed on a nearby tree. The team took note and immediately directed the spotting scope towards the source of the movement for a closer examination. Upon further inspection, the survey team observed a female leopard with a newborn cub nestled within a tree hole, partially concealed by the surrounding foliage. All photographs were captured using digital single-lens reflex (DSLR) cameras.

Results

The cub was estimated to be less than 10 days old based on its size and physical attributes, such as limited mobility. The mother leopard was seen nursing the cub at the time of observation. The mother leopard was identified to be YF11: nicknamed 'Sara'. The mother YF11 appeared to be in a relaxed state during observation, showing no signs of distress despite the presence of the survey team. She was engaged in gentle grooming of the cub, simultaneously remaining rather vigilant and keeping a watchful eye on the surroundings. The occupied tree hole was located approximately 4.5 m above the ground, offering the cub protection from ground-level threats. The duo was photographed as follows (Figure 1. A/B/C).

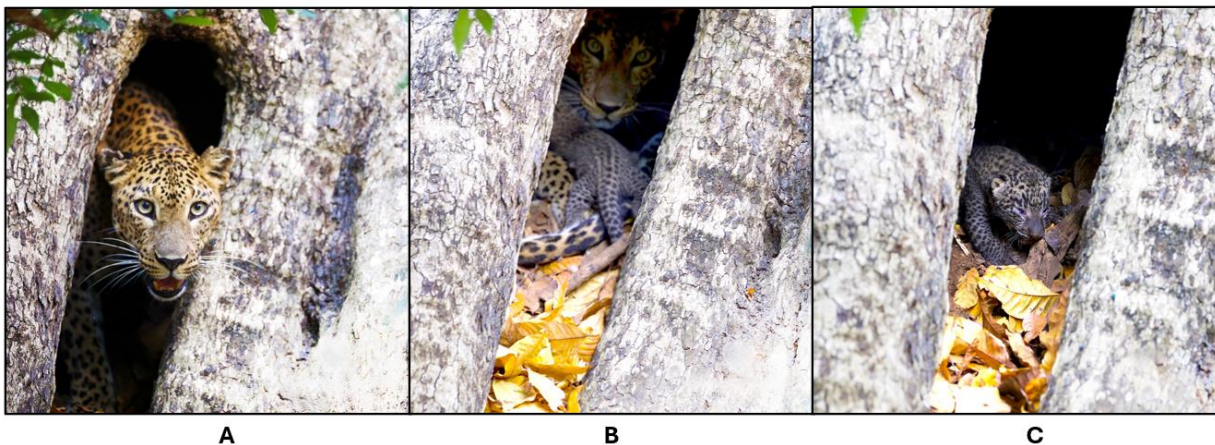


Figure 1. Leopard mother YF11 and her cub YM77 in a tree hole (Photo A: The mother leopard observing the rangers from a tree hole; Photo B: The mother leopard grooming her cub, Photo C: Cub nestled in a dark tree hole) (Credit: Dr. Gotabhaya Ranasinghe, Yala National Park, 2023)

The elevated tree hole served as a natural refuge, ensuring the cub's safety during the vulnerable early days of its life. The team had the opportunity to observe and document the intimate interaction of the mother-cub duo for a total period of 30 minutes, after which the mother YF11 descended from the tree and disappeared into the dense surrounding bushes, indicating that the

mother was likely relocating to a new, secure location or foraging for food. The cub-mother pair was followed up and spotted one year later: 6th April 2024 (Figure 2). The cub was coded as YM77.



Figure 2. The cub-mother duo a year later (Credit: Dr. Gotabhaya Ranasinghe, Yala National Park, 2024)

Discussion

The Sri Lankan leopard was first described in 1956 by the zoologist Deraniyagala (Deraniyagala, 1956). It is a solitary apex predator, primarily active during twilight hours, exhibiting nocturnal behavior in the wild. Their diet mainly consists of buffalo (*Bubalus bubalis*), wild boar (*Sus scrofa*), and axis deer (*Axis axis*) (Kittle et al., 2017). Leopard species demonstrate incredible stealth and effective hunting techniques, often employing ambush tactics (Jenny & Zuberbühler, 2005). A review discussing the reproductive success of *Panthera Pardus* in South Africa has stated early-life denning behavior, where mothers select elusive locations for protection from predators. (Balme et al., 2013) However, detailed documentation of such behavior remains limited in the Sri Lankan context. The sighting of a newborn leopard cub with its mother, YF11, in a tree hole is an unprecedented and significant observation within Yala National Park, marking the first documented case of such behavior in the area. Although young leopard cubs were previously observed in Sri Lanka, these sightings were limited to remote camera traps, typically capturing den relocation. In contrast, this sighting involved a neonate cub and mother visible from a safari vehicle in an open setting, providing a rare opportunity to observe maternal care and den-site selection. Additionally, it should be noted that cub YM77 is the youngest leopard ever to be observed and photographed in the park, adding greater value to this sighting. Based on the cub's small size and developmental stage, it was estimated to be less than 10 days

old during the first sighting. This rare occurrence not only provides a unique opportunity to observe maternal care in leopards but also offers crucial insights into their early-life development and habitat use during the most vulnerable stages of life. The fact that the youngest leopard cub ever recorded in Yala National Park was observed suggests that the park's habitat is well-suited for breeding, nurturing, and protecting young cubs. The observation of a healthy mother and cub further reinforces the fact that Yala National Park continues to provide a secure environment with abundant resources, crucial for the survival of the limited leopard population in the area. The mother YF11 and cub YM77 were sighted within their home range one year later and appear to maintain a healthy relationship between the two. As of November 2024, the cub has been named "Singhe" by the leopard identification group at the Yala National Park. The sighting of the youngest leopard cub ever photographed in Yala National Park, nestled safely in a tree hole with its mother, highlights the significance and effectiveness of ongoing conservation efforts and monitoring in Sri Lanka's protected regions. This remarkable observation offers an invaluable glimpse into leopard maternal behavior and reproductive success, emphasizing the critical need for further research into the life cycle of the species and ecosystem requirements. Understanding the conditions that allow for successful cub-rearing is key to ensuring the continued survival of the leopard population in Yala and similar ecosystems across the region.

Acknowledgements

We acknowledge the Department of Wildlife Conservation of Sri Lanka and the staff of Yala National Park, Sri Lanka, for providing us with resources to initiate our observation. Special thanks to game rangers and all the other staff at the Yala National Park for their assistance, as well as safari jeep owners and drivers for the services rendered to us. We would like to extend our thanks to Janaka Ratnayake for his generous support.

References

- Balme, G. A., Batchelor, A., de Woronin Britz, N., Seymour, G., Grover, M., Hes, L., Macdonald, D. W., & Hunter, L. T. B. (2013). Reproductive success of female leopards *Panthera pardus*: The importance of top-down processes. *Mammal Review*, 43(3), 221–237. <https://doi.org/10.1111/j.1365-2907.2012.00219.x>
- Deraniyagala, P. (1956). The Ceylon leopard, a distinct subspecies. *Spolia Zeylanica Colombo*, 28, 115–116.
- Jenny, D., & Zuberbühler, K. (2005). Hunting behaviour in West African forest leopards. *African Journal of Ecology*, 43(3), 197–200. <https://doi.org/10.1111/j.1365-2028.2005.00565.x>
- Kittle, A. M., Watson, A. C., & Fernando, T. S. P. (2017). The ecology and behaviour of a protected area Sri Lankan leopard (*Panthera pardus kotiya*) population. *Tropical Ecology*, 58(1), 71–86.

- Miththapala, S., Seidensticker, J., & O'Brien, S. J. (1996). Phylogeographic Subspecies Recognition in Leopards (*Panthera pardus*): Molecular Genetic Variation. *Conservation Biology*, 10(4), 1115–1132. <https://doi.org/10.1046/j.1523-1739.1996.10041115.x>
- Kittle, A., & Watson, A. C. (2019). IUCN Red List of Threatened Species: *Panthera pardus* ssp. *kotiya*. IUCN Red List of Threatened Species. <https://dx.doi.org/10.2305/IUCN.UK.2020-2.RLTS.T15959A50660847.en>
- Wattegedera, M., Silva, D., Sooriyabandara, C., Wimaladasa, P., Siriwardena, R., Piyasena, M., Marasinghe, R. M. S. L. R. P., Hathurusinghe, B. M., Nilanthi, R. M. R., Gunawardena, S., Peiris, H., Seneviratne, P., Sendanayake, P. C., Dushmantha, C., Chandrasena, S., Gooneratne, S. S., Premaratne, P., Wickremaratne, S., & Mahela, M. (2022). A Multi-Point Identification Approach for the Recognition of Individual Leopards (*Panthera pardus kotiya*). *Animals*, 12(5), Article 5. <https://doi.org/10.3390/ani12050660>