

Determining leopard presence, land use, and prey species availability in Ruhuna (Yala) National Park Border Areas



Update Report III– Oct 1st, 2021

Submitted By



The Leopard Project
The Wilderness & Wildlife Conservation Trust

Sri Lanka

Email: info@wwct.org

Website: www.wwct.org

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Summary Background

The reporting period for this update is July 2020-Oct 1st, 2021. Earlier phases of this study and as reported previously were: Phase I (July-August 2018 & May-June 2019) and Phase II (Dec 2020-June 2020).

Primarily this project aims to understand leopard presence and land use together with prey availability in these buffer zone areas of Yala National Park (YNP) and how this may influence the overall leopard population here. Secondly we attempt to assess the impact on leopards by the livestock farming that is ongoing in this buffer area.

During this Phase III, 15 leopards were documented utilising this buffer area of YNP.

We reported previously a female leopard that was identified as an animal that was earlier detected in Block I. We now report that 2 other leopards are using both the area within the electric fence in the hotel zone as well as Nimalawa sanctuary. Whether these leopards are using both Block 1 and this buffer area together with Nimalawa sanctuary simultaneously or not, needs to be further ascertained.

From a prey availability perspective this study clearly shows the overuse by cattle of this buffer landscape which includes the Nimalawa Sanctuary. This high presence of cattle no doubt competes with wild ungulates for fodder and runs the risk of passing on disease to wildlife. Since this landscape is directly connected to YNP it is a cause for concern, especially given that we have reported previously that cattle owners state that cattle ill-health is one of their priority issues here.

Field Work – Phase III

Remote Camera set up: The area on either side of the entry road from Nimalawa to the YNP entrance at Palatupana, bordered by the Park electric fence on the north and the ocean on the southeast, together with Nimalawa Sanctuary, made up the current study area.

The Covid-19 situation has not allowed for further monitoring in the larger border area as was planned in this Block 1 buffer zone, both on the Palatupana side and on the Sithulpahuwa-Katagamuwa side. We hope that this larger area can be covered in the next study phase.

Leopards Documented in Phase III:

During this reporting period we documented 15 individual leopards using this border area outside Block I as well as the Nimalawa Sanctuary:

Total leopard occasions = 107 (44 Nimalawa; 63 other area)
Total camera days = 3520 (1698 Nimalawa; 1822 other area)
Leopard RAI = 3.1 (2.6 Nimalawa; 3.6 other area)
Total leopard individuals = 15 (4M, 6F, 3yM, 1yF, 1yUn)

New Leopards:

New detections of three leopards occurred during this Phase III monitoring. In May a new Female was detected in the Anamaduwa area as well as a possible young Adult male within the Hotel zone; a new detection of a Male in April occurred also within the Hotels zone.

Land Use:

It is important to note that two leopards, an Adult Male and an Adult female are both using the Nimalawa Sanctuary area and the area inside the electric fence/Hotels zone area at the same time. This use of the land means that they are traversing across the open un forested part of land that is heavily fragmented and has heavy human presence.



The adult female that is using both the Hotel zone area and Nimalawa Sanctuary.



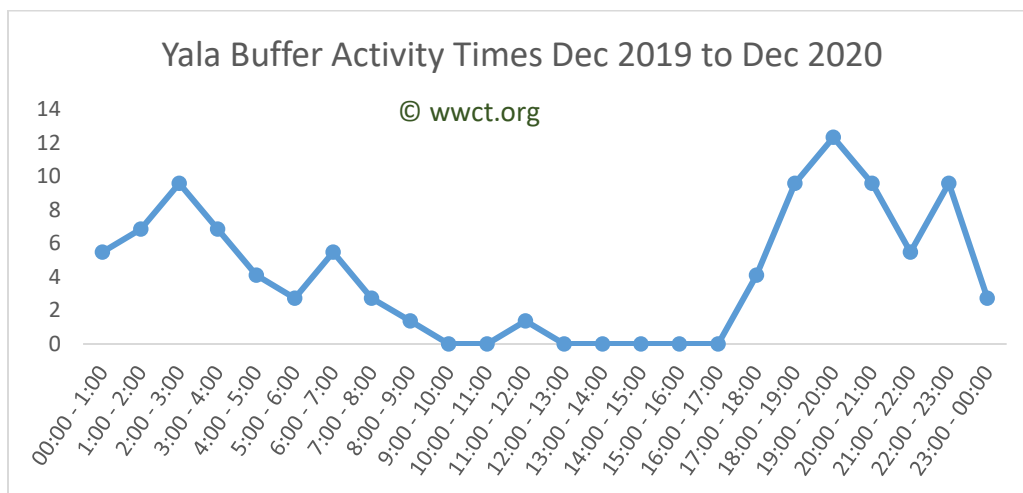
The adult male that is using the area outside the electric fence and the Nimalawa Sanctuary.



A mating pair documented in the buffer zone study area.

Behaviour:

In keeping with general leopard behaviour all leopard activity patterns within the study area followed a similar pattern to leopards in the general Yala Block 1. Activity was highest in the nighttime with a peak seen during crepuscular hours.



Activity table of leopards within the Yala Block I buffer area and Nimalawa Sancturay.

Prey Base

The continued presence of domestic cattle even within Nimalawa Sanctuary, may result in direct food competition between domestic species and wild ungulates. Disease transmission between domestic species, wild ungulates and leopards is another threat that needs to be monitored closely.

The surveys conducted with cattle herders revealed that a leading cause of cattle loss was cattle disease. Disease bourn cattle can pass on certain diseases to the wild ungulate and other wildlife populations within this YNP border area. It is important to address this issue and ensure that all cattle in this area are healthy, but that also cattle numbers are limited.

Next Steps

- Leopard scat analysis to ascertain diet and what proportion is domestic cattle. This will clarify to what extent leopard are preying on cattle as it appears only a perceived threat and offtake of cattle by leopard could actually be low. However only a few samples have been collected as due to Covid restrictions the field team have not been able to do patrols.
- Establishment of vegetation plot enclosures, as suggested previously, to monitor grazing effects by cattle. This is increasingly relevant due the increased number of cattle being grazed in this buffer zone area.
- Continued remote camera monitoring in this buffer area. Now that we are finding leopards using the Hotels zone and Nimalawa and that a relatively sizable population of leopards live in this small zone, it is important we understand the importance this border area provides to the overall leopard population of YNP.
- Better land management of this border area by all concerned establishments within this zone.

Acknowledgments

With ongoing and sincere thanks to the Department of Wildlife Conservation for continued issuance and inclusion of this study site within our permits. Thank you to Mr. Seyasingha and Mr Manoj – previous and current Yala park wardens and especially thanks to the Nimalawa office field staff for accompanying us in the field.

With thanks to WildCoast Lodge, Resplendent Ceylon for partnering support, logistics and field assistance. A continued thank you to our long term supporters Cerza Conservation and their partner, Zoo de la Barben. As always thank you to our ever-dynamic field team.