

Sunda Clouded Leopard *Neofelis diardi* (Cuvier, 1823) (Mammalia: Carnivora: Felidae) occupancy in Borneo: results of a pilot vehicle spotlight transect survey

ABSTRACT

The Sunda Clouded Leopard *Neofelis diardi* on Borneo is threatened principally by deforestation for oil palm plantations and the indiscriminate use of illegal trapping. Sunda Clouded Leopard populations are decreasing across their range, and the species has been categorised as Vulnerable on the IUCN Red List. Despite the persistence of threats and numerous surveys in recent years, information on its ecology is still limited. Most studies to date have relied on the use of camera traps as their primary sampling tool, as it is challenging otherwise to gather data on Sunda Clouded Leopards. This study aimed to test the feasibility of estimating the Sunda Clouded Leopard occupancy using a different approach. We conducted vehicle spotlight transect surveys in a mixed-use forest reserve and logging concession in Sabah. We drove a cumulative total of 8,433 km of transects at night and documented the occurrence of Sunda Clouded Leopards in eight out of 31 predetermined long-distance transects, yielding a relatively low naïve occupancy rate ($nO = 0.26$). When accounting for imperfect detection ($p = 0.15$), null occupancy of Sunda Clouded Leopards appeared much higher ($\psi = 0.55$), though our parameter estimates lacked relative precision. Despite this, our results suggest there may be potential to further refine and adapt a basic, cost-effective monitoring approach in a local mixed-use reserve with the help of concession managers and additional improvements to study design. We caution, however, that not all study sites may be suited for this type of approach and strongly advise the development of pilot studies to evaluate their overall feasibility.