

# ZEBRA PROJECT ABSTRACT

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## **SURVIVING REINTRODUCTION: BEHAVIOURAL RESPONSES OF CAPTIVE BRED AMUR LEOPARD, *Panthera pardus orientalis*, TO AMUR TIGER, *Panthera tigris altaica*, FAECES**

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**Abstract:** The Amur leopard (*Panthera pardus orientalis*) has suffered a steep decline since the 1970s, leading to the creation of a captive breeding and reintroduction program by an expert multinational team. In the Russian Far East the leopard is sympatric with the Amur tiger (*Panthera tigris altaica*), although they are generally believed to avoid each other spatially. There are concerns over whether captive bred leopards would recognise signs of the close proximity of tigers and therefore take appropriate avoidance measures. If these concerns are justified, the presence of Amur tigers in the proposed reintroduction area may pose a threat to the reintroduced leopards. To test if an innate avoidance behaviour is present, 12 captive Amur leopards were challenged with faeces of Amur tiger and zebra (as control) and their behavioural responses were recorded following a specifically designed ethogram. In addition, their interest over time, behavioural responses, and spatial utilization of the enclosure were measured and analysed. Initial interest in the faeces quickly decreased over the first hour. While control faeces appeared to stimulate mainly behaviours linked to a positive interaction, tiger faeces stimulated mainly mild avoidance behaviours. Whilst these results suggest that captive Amur leopards perceive and respond to the scent of tiger differently to an herbivore's, avoidance reactions to tiger faeces did not seem sufficiently robust to stimulate measurable avoidance behaviour. These observations suggest the need for an associative memory. Therefore, it is suggested that avoidance behavioural techniques for captive bred animals prior to release may be of value in any reintroduction programme for the Amur leopard. To the authors' knowledge this is the first time that avoidance behaviour towards a higher predator has been studied in a carnivore.

**Keywords:** Amur leopard, *Panthera pardus orientalis*, predator avoidance, olfactory predator avoidance, reintroduction.