

PASCALE SICOTTE

Counter-Strategies against Infanticide by Males in Primates

Infanticide by males, where adult males target, attack and kill vulnerable infants, occurs in a wide range of mammals, and an important body of research investigates how these males gain from killing infants. Male infanticide is costly, however, for three other individuals - the mother, the infant and the father – and much less is known about how they cope with the risk of infanticide. I have previously investigated the tactics used by females to resist or cope with infanticide risk in a wild primate species (the black and white colobus). The impact of high infanticide risk on infants and fathers, and how they might develop tactics to resist infanticide, has received much less research attention. My objective is to continue to test hypotheses related to female counterstrategies infanticide by males, and to extend the investigation to include the testing of hypotheses related to the costs to, and counter-strategies employed by, infants and fathers, with the same population of wild colobus monkeys. This population has high population density and intense male mating competition, and infanticide by males occurs regularly. Individuals experience varying levels of infanticide risk depending on the group in which they live, since paternity probability for resident male(s) varies from uni-male, polygynous groups (high paternity probability), stable multi-male, polygynandrous groups (moderate level of paternity probability) to groups where a recent takeover occurred and where the new resident male(s) did not mate with the females around the time of conception (low paternity probability). These conditions (high population density, high male mating competition, varying infanticide risk depending on the social groups) create an ideal situation in which to collect the data necessary to test the research hypotheses. My students and I will conduct a number of studies to test the following hypotheses: Under high infanticide risk conditions, mothers will wean their infant abruptly, and will mate with several males to spread paternity probabilities; still under high infanticide risk conditions, infant development will be accelerated and this faster infant development will translate into earlier nutritional independence; and fathers' tolerance of infants will be influenced by paternity and will co-vary with the level of infanticide risk. Considerable research has been conducted to understand the conditions under which male infanticide occurs, as well as to understand how infanticidal males might gain from the expression of this behaviour. This study contributes to our understanding of the other side of this evolutionary arms race, in assessing the strategies used by mothers, infants and fathers - for whom male infanticide is costly - to cope with the threat of male infanticide.