

Measuring Elephant Stress through Faeces

By Robin Cook

Conservation biologists, wildlife managers and zookeepers are becoming increasingly concerned over the well-being of free-roaming and domestic animals. It has become vital for these groups to understand how internal and external factors are disturbing animals. When



an animal is stressed, it releases specific hormones which can be measured and monitored by researchers. These hormones can be measured through blood samples, although this direct method can cause the animal more stress in the process. Therefore, a popular method for measuring stress levels in animals is collecting fresh faecal samples and

measuring the concentration of stress hormones within these samples.

Researchers have collected faecal samples from elephants to measure the stress levels over a number of scenarios. African elephants have been found to be stressed from activities such as crop raiding, translocations, exposure to hunting events and exposure to intense fires. Increased stress levels have even been found in elephants experiencing thunderstorms or witnessing nearby fireworks.

An increase in stress hormones is natural for elephants to enable individuals to cope with or adjust to abnormal or extreme situations in their environment. However, if this stress response is maintained at a high level (chronic stress), there can be broad implications on the survival and behavioural patterns shown by the elephants. This is why it is increasingly important for researchers to understand the state that their elephants are in, especially if the environment is being artificially manipulated.

