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## Abstract Book



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## Using personality data to improve the management and welfare of a semi-captive population of Asian elephants of Myanmar

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It has been shown that animal personality has many important consequences regarding a wide range of evolutionary and ecological processes. It is important to be aware of consistent differences in behaviour between individuals in a population when planning conservation strategies, as personality can have extensive implications for animal welfare. Asian elephants (*Elephas maximus*) are a major focus of conservation as their numbers have been rapidly declining in recent decades, including the one third of Asian elephants living in semi-captive conditions. We have previously assessed personality structure in a population of semi-captive Asian elephants working in the timber industry across Myanmar. While the population demography largely resembles wild elephants, our study population provides a large dataset on individual animals which allowed the scoring of a relatively large number (257) of individuals. Data were collected from 2014 to 2017 with questionnaires, where elephant handlers (mahouts) scored 28 behavioural traits for each elephant on a scale of 1 (behaviour expressed very rarely) to 4 (behaviour expressed most time). We also collected faecal and blood samples from these elephants to assess stress levels, parasite loads and several health parameters, as well as their mahouts' experience. In this talk I will present several studies in which we assess the link between personality, parasite load, stress, health and the elephant-mahout relationship. The results of these studies allow us to understand how an elephant's personality affects the way it copes with stressors, enabling us to improve elephant management and welfare in this unique semi-captive Asian elephant population.

## Mother – offspring communication in three ungulate species: which factors might influence the individuality of contact calls?

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Ungulates use individualized contact calls for mother-offspring communication. Degree of individuality of calls might depend on call type (open-mouth oral vs close-mouth nasal), age (mother vs young), neonate anti-predator strategy (follower vs hider) and degree of discomfort during call emission. We analyzed contact calls of three species of ruminants: goitred gazelle *Gazella subgutturosa*, saiga antelope *Saiga tatarica* and red deer of two subspecies, the Iberian red deer *Cervus elaphus hispanicus* and the Siberian wapiti *C. e. sibiricus*. Individual identity was well expressed in all the three species and exceeded two-to-three times the random value. Oral calls were more individualized than nasal calls in saigas, goitred gazelles and Iberian red deer. The mothers had more individualized calls than the young in saiga and Iberian red deer, the young had more individualized calls than the mothers in goitred gazelle. In Siberian wapiti, mothers and young did not differ in the degree of call individuality. The follower species (saiga) had most individualized calls and one of the three hidiers (Iberian red deer) had significantly least individualized calls (discriminant analysis based on 6 acoustic variables accurately classified individual identity in 100% and 66% calls of these species respectively); two other hider species displayed intermediate values of call individuality. In young goitred gazelle and saiga, individuality of calls differed between contexts of distress (capture by predator) and discomfort (feeding anticipation) only in goitred gazelles but not in saiga, probably because difference in maternal defense against predators between these species. Supported by the RSF, grant 14-14-00237.