

Downloaded from The “Good Tourism” Blog; www.goodtourismblog.com.

The content below was kindly supplied as is by Dr Pakkanut Bansiddhi, Researcher, Center of Excellence in Elephant Research and Education, Chiang Mai University on March 4, 2019. At Dr Pakkanut’s request, “GT” has since redacted the main findings for articles 2, 3, & 6, which are undergoing peer review by journals.

Main findings of welfare-related projects on elephants in northern Thailand

Article 1: Bansiddhi P, Brown JL, Thitaram C, Punyapornwithaya V, Somgird C, Edwards KL, Nganvongpanit K. 2018. Changing trends in elephant camp management in northern Thailand and implications for welfare. PeerJ 6:e5996

- Elephant management, activities and care varied considerably across camps.
- Work activities included riding with saddles, riding bareback, shows, and no riding. One camp was observation only.
- Tourist activities in older camps relied more on riding with saddles and shows, whereas, newer camps provided more intimate and relaxed activities.
- Average walking distance of elephants was 4.5 km per day, with a mean walking time of 158 min per day.
- 85% of camps used hooks to control elephants.
- 82% of camps chained elephants at least some of the time.
- Chains at night were on average twice (5.87 m) as long as those used during the day (2.94 m).
- All of the surveyed camps fed bananas, which were most often offered by tourists. Other supplements included sugarcane, tamarind, commercial pellet feed, watermelon, pumpkin.
- 39% of camps tethered elephants in a nearby forest or grass field for free foraging, which was more common in the newer camps.
- Large camps were more likely to have onsite veterinarians and a clinic, and participate in breeding.

Article 2: Bansiddhi P, Nganvongpanit K, Brown JL, Punyapornwithaya V, Pongsopawijit P, Thitaram C. Management Factors Affecting Physical Health and Welfare of Tourist Camp Elephants in Thailand.

(Redacted. Undergoing peer review by journals.)

Article 3: Bansiddhi P, Brown JL, Khonmee J, Norkaew T, Nganvongpanit K, Punyapornwithaya V, Somgird C, and Thitaram C. Management Factors Affecting Adrenal Glucocorticoid Activity of Tourist Camp Elephants in Thailand and Implication for Elephant Welfare.

(Redacted. Undergoing peer review by journals.)

Article 4: Norkaew T, Brown JL, Bansiddhi P, Somgird C, Thitaram C, Punyapornwithaya V, Punturee K, Vongchan P, Somboon N, Khonmee J. 2018. Body condition and adrenal glucocorticoid activity affects metabolic marker and lipid profiles in captive female elephants in Thailand. PLoS ONE 13(10): e0204965.

- A total of 33 female elephants were evaluated approximately monthly at five camps in Northern Thailand.
- Elephants participated in bareback riding (1 camp), saddle riding (3 camps) and observation only (1 camp).
- There were seasonal changes in health parameters, with BCSs, FGM, triglycerides, high density lipoproteins, low density lipoproteins, and insulin being higher in the rainy and/or winter seasons.
- Thai elephants had better BCSs when compared to those from North American and UK zoos.
- Higher BCSs were associated with higher total cholesterol and low density lipoproteins, abnormal glucose & insulin levels, and lower G:I ratios, which indicates an unhealthy condition.
- Elephants that participated in riding activities, with more work hours/day had better body condition and health measures.

Article 5: Norkaew T, Brown JL, Bansiddhi P, Somgird C, Thitaram C, Punyapornwithaya V, Punturee K, Vongchan P, Somboon N, Khonmee J. 2019. Influence of season, tourist activities and camp management on body condition, testicular and adrenal steroids, lipid profiles, and metabolic status in captive Asian elephant bulls in Thailand. PLoS ONE.

- A total of 13 male elephants were evaluated approximately monthly at five camps in Northern Thailand.
- Elephants participated in bareback riding (1 camp), saddle riding (3 camps) and observation only (1 camp).
- Elevated fecal glucocorticoid metabolites (FGM) were associated with altered lipid profiles and metabolic status and were higher in winter compared to summer and rainy seasons, potentially related to the high tourist season.
- Insulin and glucose levels also were higher, while the glucose- to- insulin ratio (G:I) was lowest, in the winter/tourist season, and related to feeding of more high calorie treats (i.e., bananas and sugar cane) season.
- During the High tourist season, elephants exhibited higher FGM and insulin concentrations than during the Low season.

- Bulls elephants appear to be in better physical health compared to females based on normal BCSs, lower insulin levels and higher (i.e., healthier) G:I ratios, perhaps because supplemental feeding of bulls by tourists is more limited.
- The working bulls in this study had better body condition than those in western zoos elephants, which could be due to higher amounts of exercise.

Article 6: Norkaew T, Brown JL, Thitaram C, Bansiddhi P, Somgird C, Punyapornwithaya V, Punturee K, Vongchan P, Somboon N, Khonmee J. Effect of tourist season and camp management on lipid profiles, body condition and metabolic function in female Asian elephants in Thailand.

(Redacted. Undergoing peer review by journals.)