

Project on paternal effects to the cognitive and social development of the offspring on feral horses (*Equus caballus*)

Jenny Stracke, Anne Berger

Leibniz-Institute on Zoo and Wildlife Research, Berlin

Horses provide an interesting animal model to test short- and long-term effects of the paternal influence on the offspring under natural conditions. As a highly social animal, horse naturally is living in long-term harem groups building strong familiar bonds. Arguing that the environment of a juvenile is highly important for the development of cognitive and social functions as well as for the emotional competence, a future study on domestic horses wants to highlight the paternal influence on the offspring as well as special effects of the stallion during the first two years of the foals' life.

Nowadays, in most husbandry systems it is still common to keep the stallions separated, raising the offspring in an intact harem group is very rare. The aim of this study is to describe the role of the stallion in the early development of the foal in an extensive pasture management system living in natural harem groups. Results are going to be compared to findings of studies on groups without the male present in the rearing phase. A precise behavioural analysis is planned; direct behavioural observations are going to be supported by long-term and continuously activity measures by special telemetry collar systems. Additional physiological measures should give evidence of the investment of the stallion. The young horses will be confronted with different tests of cognitive and social abilities (exploration behaviour, fear behaviour, play behaviour).

The results of this study will contribute to fundamental research in the behaviour of the horse and might display an important step to animal welfare in modern horse husbandry. It will be possible to set a time-frame in which the male does have positive influence on the offspring and therefore should be kept with the family. A detailed knowledge of the influence of the male to cognitive and social abilities could as well be applicable in the training of horses and therefore be of great importance in equestrian sports.

Key words: horse, paternal investment, socialization, cognitive behaviour

Corresponding author:

Anne Berger

Tel: ++ 49 + 30-5168 328

Fax: ++ 49 + 30-5126 104

E-mail: berger@izw-berlin.de