

A Cranio-Morphometric Study of the P.R.E. Horse

Supervisors: Dr Sam Franklin and Dr Rachel Norris

Samantha.franklin@adelaide.edu.au or rachel.norris@adelaide.edu.au

Aims: To determine the morphological disparity of the P.R.E. horse by:

- (a) Determining biological meaningful craniometric landmarks on P.R.E. horses
- (b) Quantifying these craniometric landmarks on a sample of P.R.E. Horses and comparing them to a sample of Przewalski, Thoroughbred, Arabian, and the Spanish (preferably Andalusian) horses.

Background Info:

P.R.E. Horses are currently not a recognised breed. In order for this breed to be acknowledged anatomical features of the head need to be defined. When compared to the Arabian horse redeeming features of the head of P.R.E. horses can be observed such as: very fine nasal bones, a fleshless rostrum and with prominent nerves near the skin. In addition, there is an overall reduction in head musculature. Recognition of these horses is currently made using observations of the external features of an individual animal. To date there has been no quantification of underlying bone structure to determine the validity of the P.R.E. horse.

Specialised methods: 3D geometric morphometrics using a 3D Microscribe digitiser. Horse material will need to be recovered, possible Museum visit.

Null Hypothesis: that there is no difference in craniometric morphology between the P.R.E. horse and the Spanish (Andalusian) horses.

Null Hypothesis: that there is no difference in craniometric morphology between the P.R.E. horse and the domestic breeds horses.

Null Hypothesis: there is no difference in craniometric morphology between the P.R.E. horse and the Przewalski horse.