



WRL reference	M03 D01
Module	M03 Animal Behaviour
Data set	D01 Bull elephant dominance relationships after contraception

Research question:

1. How do you identify individual elephants based on their physical appearance?
2. Is the dominance hierarchy of bull elephants at Pongola determined by age or has it been affected by the vasectomies?

IF YOU OPEN THE FILES “M03 D01 DOMINANCE COMPLETED” and “M03 D01 AGE AND DOMINANCE COMPLETED” YOU CAN SEE THE FULLY ANALYSED DATASETS.

Answer and discussion to the research question:

1. Bull A = Ingani, Bull B = Khumbula, Bull C = Lucky, Bull D = Ntini, Bull E = Asiphephe, Bull F = Mgangane, Bull G = Kohlewe, Bull H = Shayisha
2. Our data indicates that the dominance hierarchy of bull elephants at Pongola is determined by age. This means that the hormones and behaviour of the bull elephants have not been adversely affected by the vasectomies. You will notice that the scatter plot does not show a nice diagonal line, but this is to be expected, considering that many of the bulls are of the same age (and therefore similar body size). However, Ingani is the oldest bull and is clearly the most dominant. Similarly, Shaisha is the next oldest and clearly dominant to all other bulls apart from Ingani. The rest of the hierarchy does follow the age of the bulls, but as Asiphephe, Khumbula, and Ntini are all the same age, their dominance ranks are most likely determined by slight differences in body size or personality.

