

# **Network scaling reveals consistent pattern in hierarchical mammalian societies**

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## **Supplementary information 1 – social organisation**

### **Elephant (*Loxodonta africana*)**

The fundamental basis of elephant social organisation is the mother-offspring unit (Moss & Poole, 1983). Several closely-related mother-offspring units form cohesive family units, which in turn frequently associate with other family units to form a bond group. Bond groups that use the same dry season home range are termed clans, with the final level of social organisation, the sub-population defined by the general ranging area of the animals within the dry season (Moss, 1981; Moss & Poole, 1983). In the wet season, sub-populations abandon their dry season ranging patterns and the whole population may mix freely together (Moss & Poole, 1983).

### **Gelada (*Theropithecus gelada*)**

The basic unit of the gelada social system is the one-male unit (OMU), comprised of one male, several related females and their offspring with female social relationships focussing predominantly on other females. Several OMUs may be closely associated and form a team with several teams foraging together as a band. Communities are the highest grouping level in gelada and refer to overnight associations of bands (Kawai et al 1983).

### **Hamadryas (*Papio hamadryas hamadryas*)**

Hamadryas have a similar social structure to gelada although a key distinction is that females may transfer between OMUs and social relationships with OMUs are focussed on males (Kummer 1968, Dunbar 1983); several OMUs form a clan, several clans form a band and several bands a troop (defined, in this case, as bands that habitually share the same sleeping rock) (Kummer 1968, Abbeglen 1984).

### **Orca (*Orcinus orca*)**

Two forms of orca social system are recognised (resident and transient) and here we focus of resident orcas which tend to forage on a diet of fish within localised coastal locations (as opposed to the transient orca which are nomadic and forage on mammalian prey). The

smallest unit of resident orcas consists of a matriline involving a matriarch and her descendants. These matriline build up into pods of orcas with the same dialect which in turn form clans, which consist of pods with similar (but not the same) dialect. The largest group of orcas is the community which are defined as clans that associate with one another (Ford *et al.* 2000).

## References

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