

Wild equids ecology and behaviour, distribution, social behaviour, and social organization

Invited Presentation

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In contrast to the great similarity in behaviour and ecology of the 6 extant Equid species, 2 distinct types of social organisation have evolved, and both are adapted to life in semi-arid to arid regions where environmental conditions force them to migrate seasonally or opportunistically.

The ranges of the various species overlap: Mountain Zebra *Equus zebra* and Plains Zebra *E. quagga* in South Africa and Namibia, Plains Zebra and Grevy's Zebra *E. grevyi* in Kenya and Ethiopia, Grevy's Zebra and African Wild Ass *E. africanus* in Ethiopia, Asiatic Wild Ass *E. hemionus* and Przewalski Horse *E. przewalskii* in Mongolia and China. Although, in the overlap zones, individuals of the different species are using the same resources like water and grazing next to each other, they rarely make closer contacts.

In the type 1 species, Horse, Plains Zebra and Mountain Zebra, the adults live in non-territorial, stable, one-male families and as single bachelors and in bachelor groups. Family stallions have the exclusive mating rights with the mares in their harems. These consist of up to 6 unrelated mares plus their offspring, totalling up to 20 members.

Mares stay in their harem until death. Stallions' tenure is from age 5-6 years, i.e. when they succeed in controlling a harem, for close to life time, but are replaced when dead or incapacitated. Harems are stable even in the absence of a stallion, indicating voluntary membership. Adolescent mares leave their parental families to become members of another harem.

In Plains Zebra the adolescent mares are abducted, during an oestrus, by suitors who fight the defending family stallion/father. Successful stallions are bachelors who start a family, or family stallions enlarging their harem. Young stallions leave their parental families voluntarily at age 2-3 years and join bachelor stallion groups from where the family stallions are recruited.

An individualised dominance hierarchy exists

with the stallion in the alpha position. It is based on individual knowledge and recognition of the members.

In the type 2 species Grevy's Zebra, African Wild Ass and Asiatic Wild Ass adult stallions monopolise territories in which they have the exclusive mating rights. Stallions are tolerant of any conspecifics entering their territory. Bachelor stallions behave subordinately - or fight for the possession of the territory which is a prerequisite for reproduction.

Mares join up to form anonymous and unstable groups or herds. The only stable unit is of a mare and her offspring. In Grevy's Zebra mares with foal join preferentially conspecifics of the same social status, as do mares without foal.

Matings take place inside the territory. There is no lasting relationship of the mare with a particular stallion, and the mare may be mated by any stallion whose territory she is visiting.

Territories measure up to 10 or more square kilometres, and tenure is for several years.

Grevy Zebra territorial owners leave their territories for a few hours to visit a water hole, or for months when grazing and water conditions are below requirements, and re-occupy it upon return, unchallenged.

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