

COMPETITION AND COOPERATION IN KILLER WHALES

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Abstract

Social mammals have the most developed form of group-living characterized by cooperative behaviour, reduced intragroup competition and stable group memberships. Killer whales off the Norwegian coast occur in groups of adult males and females with young, and associations between adult whales seem to be long-lasting (years). The competitive and cooperative behaviour of the whales were studied and compared with the behaviour of other large and social mammals.

Killer whale groups were commonly observed to feed independently of each others within close range. Deviations from intergroup tolerance occasionally occurred as agonistic group interactions, where one group became displaced from its feeding patch or was forced to retreat by another group. The whales cooperated in competitive interactions with other groups, and the interactions might be influenced by group size, number of adult males and the social identity of the whales.

Reproducing killer whale females may have several dependent offspring, eventually cared for by other group members. Adult males were observed to travel with unweaned calves and small juveniles in close proximity, a swimming formation that benefits the young through locomotory assistance. Adult whales seemed to modify their diving behaviour to suit the capacity of the young. The killer whale males were fully grown, and the alloparenting role is not attributed younger males waiting for breeding options.

It is concluded that collective defence of resources against conspecifics and communal care of young occur among killer whales, as it has been described for species like wolves and lions. There are also some differences. Killer whales do not seem to be territorial and adult males participate in care for the young, which is unusual among terrestrial carnivores.