

# Namib Brown Hyenas (*Hyaena brunnea*) and their Marine Prey

Ingrid Wiesel

Brown Hyena Research Project (Inc. Ass. not for Gain), Lüderitz, Namibia

Brown hyenas inhabiting the coastal Namib Desert mainly scavenge and prey on Cape fur seal pups (*Arctocephalus pusillus pusillus*). These pups are either found on mainland Cape fur seal breeding colonies or washed up along the beaches. At these colonies, brown hyenas regularly kill seal pups. The majority of pups found at the colony are killed in surplus or are only partly and selectively consumed. Brown hyenas don't show prey choice regarding the condition of the pups, but consume the brain of larger pups and hence have an additive impact on seal pup mortality.

## Introduction

Brown hyenas are described as being scavengers. Along most parts of the Namib Desert coast they are the largest and apex predator foraging at mainland Cape fur seal breeding colonies, such as the Wolf Bay seal colony. This colony is a localised, abundant food source with a year-round availability of seal pups.

I investigated whether

- brown hyenas show prey choice regarding the condition of pups
- seal pup predation, as a consequence of the previous question, has an additive effect on seal pup mortality



## Methods

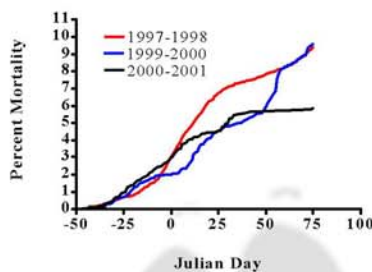
Data collection took place at the Wolf Bay seal colony in the southern Namib Desert, during and after three seal pupping seasons from November until March each year. The number of dead pups, which died of non violent causes or predation was recorded in 10-14 sample areas. Pup body measurements and mass were taken.

Brown hyena kills were recorded as

- surplus kill (SK: no part of the pup was consumed)
- excessive kill (EK: only the brain was consumed)
- cached excessive kills (CE: only skull bone remains were found)
- completely consumed kill (CC)

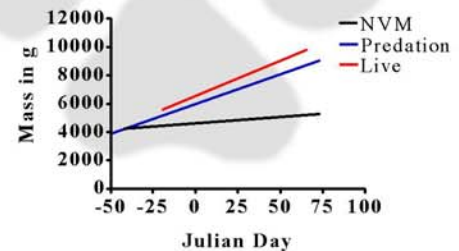
Samples of live pups were weighed monthly to determine their general condition at the colony.

## Results



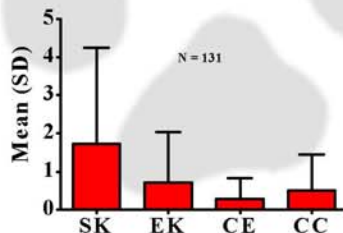
Cumulative brown hyena predation was 9.4% in 1997-1998, 9.6% in 1999-2000 and 5.1% in 2000-2001 (Julian Day 0 = 31. December).

Pup production at the Wolf Bay seal colony differed between years and was lowest in 2000-2001. This resulted in empty sample areas from the middle of February.

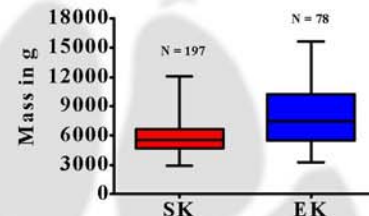


The slopes of linear regression curves of changes in pup mass of non violent mortality (NVM) pups differed significantly from those of hyena predations and live pups.

The slopes and elevations of live pups and hyena predations did not differ significantly.



Brown hyenas killed significantly more pups per day in surplus (SK) than they consumed selectively (EK) or completely (CC) at the colony or cached (CE).



The mass of pups, which were selectively consumed (EK), was significantly higher than the mass of pups killed in surplus (SK).

## Conclusions

- Brown hyenas killed seal pups throughout the study period.
- More pups were killed in surplus than consumed.
- Brown hyenas did not choose between large and small pups, with a high probability of non violent mortality.
- As a consequence brown hyenas have an additive impact on seal pup mortality.
- Brown hyenas selectively consumed larger seal pups.

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