

# GOATS

## VISION AND OTHER SPECIAL SENSES

Goats have prominent eyes, a panoramic field of 320°–340° and a binocular vision of 20°–60°. Tests have been done on male goats to determine their capacity for colour vision and they have been found to distinguish yellow, orange, blue, violet and green from grey shades of similar brightness (Buchenauer and Fritsch, 1980). They have a well-developed sense of smell and a new food is investigated by sniffing it.

## SOCIAL ORGANISATION, DOMINANCE AND LEADERSHIP

In a herd of feral goats it is a large male that is dominant and maintains discipline and coherence of the flock (Mackenzie, 1980). He leads the group but shares leadership on a foraging expedition with an old she-goat (flock queen), who will normally outlast a succession of kings.

Horn size is a rank symbol and can designate dominance without combat. It has been suggested that scent urination, a ritual where a male goat urinates on his beard, is an indicator of rank and physical condition. O'Brien (1981) has reviewed some aspects of social organisation and behaviour in the feral goat, including the importance of olfactory communication.

Agonistic encounters can be "non-contact" threat which includes staring, a horn-threat with chin down and horns forward, rush or rear as a challenge threat. Contact agonistic encounters include pushing the forehead against another goat, butting (in which interactants engage horns), and the rear-clash, which is a high-intensity encounter.

In feral groups, the group size and composition is highly variable and unstable. Family groups may include a dominant male, and a small number of adult females and their offspring. Males form large bachelor herds during non-breeding periods.

It is almost impossible to drive goats and when danger approaches, goats scatter and face the enemy, depending for safety on agility and manoeuvring (Mackenzie, 1980).

Alarm behaviour is highly developed. The female stands rigid in a typical nursing posture with ears towards the source of alarm. This stimulates the young to run to the female. She may snort loudly several times to alert other goats. Depending on the source of alarm, the group may either take flight, move away slowly or return to previous activities.

*Leadership.* Early work (Stewart and Scott, 1947) showed that leadership orders did not seem to be related to age or dominance. Donaldson et al. (1967) found milking order was consistent, and that there was a correlation between entrance order and milk weight.

## SEXUAL BEHAVIOUR

The male tests the urine of the female and performs flehmen. He then approaches the female with a slight crouch, head slightly extended, horns back and ears

forward, the tail vertical and often with the tongue extended (Coblentz, 1974). The female either remains still as the male approaches or begins to move away depending on her state of receptivity. If she is receptive the male does the 'rush-grumble', where he rushes towards the female and vocalises. He then nuzzles her flank, back and anogenital area with his tongue extended. The female signals her willingness to copulate by standing still with her head lowered and tail to the side.

## MATERNAL-OFFSPRING BEHAVIOUR

Within a few minutes after parturition the mother begins actively licking and grooming the kid. This not only cleans the kid but probably provides cues for neonate recognition by mother. These cues are a complex interplay of vocal, visual, olfactory and gustatory stimuli. The maternal-offspring bond is very individually specific and the female aggressively rejects the suckling attempts of alien offspring.

Feral goats hide the neonate to prevent attack by a predator. This is similar to cattle behaviour, but the young of the sheep are followers.

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