ASPECTS OF BEHAVIOURAL

ECOLOGY OF CAPTIVE FERAL GOATS

(CAPRA HIRCUS L.) WITH EMPHASIS

ON THE MOTHER-OFFSPRING RELATIONSHIP

A thesis presented in partial fulfilment
of the requirements for the degree of
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ABSTRACT

A 10-month study of the behaviour of a herd of 60 captive feral goats (*Capra hircus*) was carried out at the Ballantrae D.S.I.R. hill country research station in the lower North Island of New Zealand from April 1990 to February 1991. The primary aim of the study was to describe the mother-offspring relationship over the first three months of the kid's life and to investigate sex differences in maternal investment.

There was no significant sex difference in the mother-offspring spatial relationship, however, it was found that twins remained closer to their mothers during the first three months. There were small sex differences in the frequency of suckling in single kids only, but other variables of suckling behaviour including total time spent suckling, and the duration, initiation and termination of suckling were not significantly different between the sexes. Total suckling time, suckling duration and frequency, mother initiation and kid termination all decreased with kid maturation. There were significant differences in all suckling variables between single and twin kids.Sexual differences in kid birth weight, and growth rate, were also highly significant. Discrepancy in the proximate measures of parental investment made it difficult to conclude whether sex-biased maternal investment occurs in feral goats. Further investigation is required to determine the accuracy of suckling behaviour as a measure of maternal investment.

The second part of the study involved the construction of diurnal activity budgets for adults and for kids over the period 0830 to 1630 hours. The percentage of time spent grazing was greatest during the mating season whereas in the

gestation and kidding season a larger portion of time was devoted to rest. Female kids spent more time grazing and less time playing and resting than male kids up to the age of three month. Time spent grazing was greater in single than in twin kids. The time allocated to different activities changed significantly over the first three months of age.

In the third part of the study, the social events following the introduction of a new entrant to the herd was investigated. Exploration was the most common action of herd members toward the new entrant. A peak of agonism occurred within the first hour following the introduction of each new entrant then decreased rapidly. The response of the herd was influenced by the dominance status of the new entrant, and the season of the introduction.

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