

## Behaviour Problems

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After the cat and dog, the rabbit (*Oryctolagus cuniculus*) is the third most common small mammal kept in the UK as a companion animal. Owner attitudes to rabbits have changed over the last decade from the traditional view of it being a cheap, easy to keep, ideal children's pet that lives for just a few years, to that of a pet for adults which can be an extremely rewarding company. This change in attitude is reflected in the increasing number of rabbits kept indoors, the provision of rabbit health insurance, the increased demand for veterinary assistance when a rabbit is unwell and the increased demand for behavioural therapy when a rabbit displays problem behaviour (1).

Behavioural patterns that are regarded by owners as being a problem include aggression to people and/or to other rabbits, inappropriate elimination, pica, scent marking and over-grooming. There may be organic causes for these problems and these should be ruled out first. However, many of these 'problems' are a result of ignorance of normal rabbit behaviour. An understanding of normal behaviour can prevent and help resolve these problems (2, 3).

The rabbit is a member of the order Lagomorpha and originates from the Iberian Peninsula. Its original habitat is characterised by low quality scrub. It is a medium-sized, social herbivore and the only truly burrowing species of Lagomorpha. Rabbits tend to inhabit drained areas and their preferred habitats include an area of short grassland around the warren. The warren consists of interconnecting burrows with several entrances. The rabbit is highly predated in the Iberian Peninsula where it contributes an average of 20% of the total vertebrate prey of 29 species of predator.

The rabbit is a selective grazer that is most active from dusk to dawn and spends the daylight hours below ground. Approximately 70% of its above ground activity is spent feeding. The social organisation is focussed around the warren with small stable groups associated with other groups in the vicinity (4). Benefits of group living include increased efficiency of predator detection, but the disadvantages include intra-specific aggression, especially during the breeding season. Groups are formed by the selection and defence of burrows, by females. The size of the group is dependent on population density and the availability of resources, particularly suitable sites for burrowing. Where burrowing is easy, the major social unit is a single female and her mate. The sex ratio in larger groups tends to favour females. Satellite animals of either sex are found living close to, but not accepted into, the breeding group. Adult rabbits rarely leave the group in which they first breed. Juvenile males tend to migrate and juvenile females to remain to breed in their birth group. Outside the breeding season, the rabbit becomes less territorial and migrants can integrate into new groups.

The rabbit is a prolific breeder that displays an unusual form of parenting known as 'absentee care' (5). The female digs a nest burrow away from the warren and the young are born into a grass, fur-lined nest. The nest burrow is blocked after each nursing visit, which occur at approximately 20-hour intervals and last for about three minutes. Little other parental behaviour is shown.

The social displays of rabbits are subtle, as are their indicators of fear and pain. This is in part because they are active at night but also as an anti-predator device. They do have a range of visual and vocal signals, but scent is a main method of communication. Scent from sub-mandibular glands is used to mark territorial boundaries and other rabbits. Anal gland secretions are deposited with faeces at latrines. Inguinal gland secretions are transferred during urine marking which is used both agonistically and as part of the courtship ritual.

The domestication of the rabbit has been quite recent and its behavioural repertoire corresponds closely to that of the wild species (5). The lack of understanding of the rabbit's requirements in terms of feeding, social behaviour and the requirements for safety (being such a prey species) can lead to provision of inadequate environment and inappropriate care by owners. This in turn can result in the development of behavioural problems. In order to resolve a behavioural problem, the underlying causal factors need to be ascertained. These can include illness, pain, frustration, fear, learned behaviour, resource related issues, sexually related behaviours and stress relating to an inadequate environment (6).

#### References

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