

AILMENTS AND PROBLEMS

Geckos are hardy animals, and if kept in hygienic conditions, are not likely to suffer from many diseases. However, some of the problems outlined in this chapter may be encountered from time to time.

When dealing with sick geckos, much of the success of any treatment relies on changing the environment to one which is warm and relatively dry, and gives the gecko ready access to food and water. A small invalid cage about 30 cm square that can be taken indoors is very useful. Some keepers provide warmth by using a lamp as a heat source, and a free-standing desk lamp can be useful for this. During the warmer months, moving the cage to ensure the gecko gets a good daily quota of sunlight, and is kept in a reasonably warm place overnight, may be all that is required. A thermometer is useful for keeping a check on cage temperature, which should be kept at over 18°C if at all possible, and should not exceed 25°C.

In many cases the above treatment will prove effective without any need for medication. Sick geckos can be gently encouraged to take supplementary foods such as fruit gels by applying them sparingly around the mouth, from where they are usually licked, unless the gecko is in a very poor state of health. Generous amounts of live food should be provided, as well as clean fresh water.

Wounds

These occur occasionally in captivity due to fighting, or by cats trying to get at the geckos through the mesh of their cage. They should be carefully cleaned with a mild disinfectant solution and treated with a suitable veterinary ointment or cream. Some keepers have successfully used ointments based on aloe vera. Don't use ointments which are greasy or sticky, and likely to attract dirt. One cream available from the pharmacy is Flamazine, which is formulated for treating open wounds and burns in humans. Don't over-treat; two or three applications are usually sufficient, and repeated handling can stress the animal. Once healing has commenced and if there is no obvious sign of infection, leave nature to take its course.

Fungal Infections

These occur occasionally in captive geckos, appearing as black spots or discoloured areas on the skin (hence the common name 'black spot'). The complaint seems to arise from keeping geckos in conditions they are either overcrowded, unhygienic or excessively damp. Over-vegetated cages can be a cause, and simple routine pruning of cage plants may be all that is needed to prevent the problem recurring. Some cases may resolve spontaneously when conditions are corrected, but severe cases may result in death if untreated. The following remedies have been used with a degree of success.

Betadine aqueous (an iodine preparation which is also available as a tincture). This preparation is relatively cheap, safe, and available at most pharmacies. Treatment involves applying a small amount of the Betadine solution onto a piece of cotton wool which has been initially dampened with a little warm water. This is then rubbed gently over the entire animal with the exception of the eyes and mouth. The process should be repeated at two day intervals until the animal sloughs cleanly and there is no further evidence of the disease. Betadine aqueous does not appear to cause any skin irritation or impede the normal skin shedding process, two problems that have been encountered with the application of ointments to geckos. Betadine can also be used to disinfect cage surfaces.

Zephiran (Benzalkonium chloride) used at 0.02%. This may be applied in the same manner as above.

Red Mite

Geckos, both in the wild and in captivity, sometimes become infested with parasites commonly known as red mites. These appear as small orange-red objects firmly attached to the skin, particularly around the eye-folds, in the ear openings and around the limbs. In the wild, they seldom seem to cause their host serious harm, but their numbers can become excessive in captivity, and it is wise to remove them. Mites on the body can be removed by careful scraping with a sharpened match-stick. Those which are very close to the eye, or in the ear opening, can be painted with a non-toxic oil. Any kind of cooking oil will do. This suffocates the mites, which will eventually drop off, although several treatments may be required.

Lorexane Cream (Gamma Benzene Hexachloride B.P. 1% w.w.) may also be used. This preparation is sold as a treatment for head lice in humans, and has proved very effective in eradicating red mite in geckos. It should however be used very sparingly, as some species may react unfavourably if large amounts are applied. Application should be made to the mites themselves and a small surrounding area of skin by using the end of a toothpick or similar implement.

Blow-fly Strike

Problems sometimes arise in captivity when some blow-fly species are used as food for geckos. Very occasionally live larvae from these flies have been found lodged within the external ear of the gecko, and if untreated, death follows fairly quickly. The possibility of blow-fly strike should not preclude the use of such flies as food, as the occurrence is so rare, but it is as well to keep the possibility in mind and check the animals daily if there are blow-flies in the cage.

The fly species thought to be responsible are the brown blow-fly (*Calliphora stygia*) and the golden-haired blow-fly (*Calliphora quadrimaculata*). Treatment

consists of removing as many of the maggots as possible and then filling the ear cavity with an antibiotic ointment.

Sloughing Problems

Captive geckos occasionally have problems when shedding their skins. Instances can occur where the skin is retained over the feet or toes, particularly near the claws. If neglected over several sloughings, a residue of skin builds up, restricting the blood supply in these areas. In severe, long-standing cases, loss of the affected toes can result. This situation can easily be avoided by gently removing this loose skin with tweezers. The feet can be immersed in warm water for a few moments if necessary, after which the old skin residues can usually be easily wiped away with a soft piece of cloth.

If captive geckos continually suffer from sloughing difficulties, this can indicate an environmental problem, such as insufficient sunlight or surroundings that are too damp. Insufficient rough material in the cage for geckos to use to assist with sloughing can also lead to problems.

Calcium Deficiency

Like many reptiles, geckos need exposure to natural sunlight (unfiltered by glass), to manufacture the vitamin D³ they need for absorption of calcium. This can lead to metabolic bone disease. Symptoms include kinks in the spine or tail; in the early stages the tail may take on a wavy appearance. Young may be born with bone deformities, and have a high mortality rate. This problem usually only occurs with animals caged indoors, but can occur in heavily shaded outdoor cages. Treatment consists of vitamin D³ supplementation and correction of keeping conditions, either by resiting cages where they receive more sunlight, or provision of UV light by artificial means if the animals are housed indoors. This can be done by providing broad spectrum fluorescent lighting of a type suitable for use with reptiles. It must however be noted that the UV requirements of New Zealand lizards are poorly understood, and until such time as there is more available data, keeping them in circumstances where they have to rely totally on UV from artificial sources is not recommended.

Ants

Ants often become a problem when they enter gecko cages, attracted by the honey or fruit juice placed there for the benefit of the geckos. Some species may make nests in pot plants in the cages, or under leaf litter or other material on the cage floor. In most cases, their presence is merely a nuisance, but there have been recorded instances where ants have attacked and killed captive geckos. The best method of control is simply to clean out cages regularly, soak pot plants in water and flood the floor of the cage. This will usually get rid of an infestation and it will often be some time before they move back in.

Commercial ant killer may be safely used in cages as long as the geckos are not permitted access to it. The best way to achieve this is to put a small quantity into a plastic bottle or canister with a 2 mm hole drilled in the lid. The ants will soon find the hole, and this method has the added advantage of reducing evaporation, allowing the bait to remain effective for quite a long period of time. Some brands also provide plastic bait stations. These can be used, but take care when refilling them, not to spill any of the bait liquid on the outside of the bait station where geckos could lick it.

Cage Hygiene

In the interests of hygiene it is obviously necessary to clean cages on a regular basis. Frequency of cleaning will vary according to the size of the cages, and the number of geckos housed in them. The aim is to prevent excessive deposits of faeces or dead food items from building up. The use of disinfectants for cage cleaning has been found to be largely unnecessary, except when disease has occurred. Food and water vessels should be kept in a clean condition by regular scrubbing. A toothbrush can be useful for this task.

General Hygiene

Although *Salmonellae* seldom appear to cause disease in geckos, these bacteria have been found quite commonly in lizard faeces. In humans these bacteria are responsible for gastrointestinal disease with severe vomiting and diarrhoea, particularly in young children. For this reason it is advisable to make a routine of washing your hands after handling your lizards or their environment, and making sure that others who may have contact with your lizards do the same.

Painless Destruction

If, due to severe injury or disease, it is necessary to kill a lizard (or any other small reptile or amphibian), the most humane method is to place the animal in a suitable container and put it into a refrigerator. Once it has become inert it can then be placed in a freezer. As a reptile's body temperature falls, its metabolism slows until it reaches a state resembling hibernation. Further reduction in temperature to freezing point or below results in the animal's death. It should be left in the freezer for at least 24 hours before disposal. Please do not place any animal directly into a freezer, because the temperature has to be lowered gradually for the process to be humane. If a lizard killed in this manner is required for preservation, it should be allowed to thaw completely before placing in preservative. Failure to follow this procedure will result in damage to the specimen.