



DO YOU NEED A HELPING HAND OR ADVICE?

Email your queries to prk.ed@kelsey.co.uk or write to the address on page 66. A selection of submitted questions will appear here every month, and a prize of Vetark products will be awarded to the writer of the Star Question. Regrettably, replies can only be given through this column, and if you are worried about the health of your animal, seek veterinary advice without delay.

Lighting for a mixed leopard gecko colony



Pale skin characterises albino leopard geckos, such as this jungle tangerine Tremper



There are a lot of differing opinions regarding leopard geckos, and whether they need UV light. I have a group of adult geckos housed together with a mix of

morphs including albinos. As albinos are sensitive to the UV, I currently have not been using any within the vivarium, but I am now concerned that I am harming the others by not giving them access to any UV light. Is a calcium-based supplement and a good diet sufficient to keep all my geckos healthy or do I need to house them separately?

Let's look at the wild leopard gecko. This should always be the starting point, in terms of appreciating the needs of reptiles being kept in vivarium surroundings. No matter how far a colour morph is removed from the normal colour form, it will still have the same basic requirements. We may have to adjust the way that we use technology to suit the more demanding requirements of colour morphs, and especially albinos, but the basic care in all but a few cases will be similar.

Leopard geckos are crepuscular lizards, originating from the mountains of Pakistan and Afghanistan. They survive very well by living in

tunnels and rock networks during the day and venturing out into the desert sun during the early morning and late evening when there is less heat, and more importantly, less risk of encountering predators such as birds of prey.

These lizards would experience a UVI (UV Index) of around 2-3 in this kind of light in the wild. We know from skin tests that their skin is around fourteen times more UV absorbent than that of a fully diurnal (daytime-active) desert-dwelling lizard. Exactly the same chemical and hormonal changes take place in the leopard gecko's body, but the vitamin D3 cycle takes a much shorter time, because of this increased absorbency of their skin.

Self-adjustment

Keeping a colony of leopard geckos successfully is quite a skill. Avoiding fighting and ensuring a balanced diet for all the animals poses a real challenge. But this is how they live in the wild, although obviously the space available in their native habitat is greatly increased, compared with vivarium surroundings.

Lighting for albinos is not as difficult as you may think, and keeping visually normal animals with albinos is not a problem.

The trick with providing UV light or any light source at all for light

sensitive animals is to allow the animal to self-regulate. Leopard geckos have adapted over millions of years, and most significantly, they have acquired the ability to see UV tetrachromatically. This means they can see both light and UV and the relative power gradients. They can easily tell how much exposure they require and for how long, ensuring that they are more than able to self regulate in this respect!



The amazing skin of a Bell albino - in this case, a bolt strip - seen in close-up.

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By providing the correct lighting over a suitable period of time, and by offering replica caves and tunnel networks, so leopard geckos of all types will behave as they would in nature. The most common behavioural response that I observe with albinos is the way in which they will stretch out under the lamp but hide their heads in the caves. This allows for a suitable period of exposure but shields their sensitive eyes. It's very clever!

Providing suitable lighting

How should you provide this lighting in the right way? Firstly select the correct lamp for the height of your vivarium. UV decreases dramatically in power as light travels further from the lamp. Using the correct reflector will help to increase this safe-fitting distance significantly.

Take the case of a vivarium that is 30cm (12in) high and housing a leopard gecko. This would require a natural sunlight T8 lamp and reflector, in order to provide the right UVI at the basking point. If the accommodation is 45cm (18in) high however, you would need a D3 6% T8 lamp and reflector to achieve the same result. Should the gecko's quarters be 61cm (24in) in height, you will need to choose either a D3+ 12% T8 or high output T5 D3 lamp and reflector. In all cases the energy required at the basking point remains the same but as the height increases, so should the power at source.

Always fit light sources above the animal. By lowering the lamp in the vivarium, the light source is placed at an unnatural angle and could shine directly into the animal's eyes. This is the biggest risk from artificial lighting, particularly for albinos. Use a lamp that is roughly two-thirds the total length of the vivarium and then fit this lamp as far into the hot end here as possible, although you may need to carry out some slight adjustments at first.

It will then allow a natural drop off into shade at the cool end of the geckos' quarters. This pattern of light and dark, heating and cooling is essential to the D3 cycle. Use rocks and branches too, so the geckos can get closer to the lamp - up to about 15cm (6in). You will soon see how they self-regulate, plus you can use timers to create light and shade patterns. My timers typically come on in the morning and go off three or four times right through the day. This simply replicates cloud cover.

Lighting provides good levels of vitamin D3 and other hormones but cannot supply all of the other vitamins, trace elements and minerals that reptiles require. Supplements are therefore necessary too, and should always be used in accordance with their individual instructions.

John Courteney-Smith, Arcadia Products



I keep scorpions and I'd like to find livefood that I can breed for them. I've tried them on roaches, but they didn't seem interested. I don't really have the space to breed crickets. Any other suggestions please?

You could always try feeding your scorpions on mealworms; mine always enjoy them. The only issue with mealworms is that sometimes they will burrow into the substrate before they can be eaten. This isn't a big problem though, as the scorpion may just pick them off later, but you might want to consider feeding your scorpions with mealworms directly, using blunt-ended tweezers for this purpose.

Mealworms also have the added benefit of being incredibly easy to breed and culture. Start by obtaining a tub of mealworms, and feed some of these to your scorpions, allowing the others to pupate into beetles.

I then use a 9 litre Really Useful Box which you can buy on-line or from stationers, to house the culture. I add a layer of 7.5-10cm (3-4in) of oats, cereal and crushed Weetabix as both a substrate and a food source.

Once it is set up, I also occasionally put a little organic vegetable matter on top as an extra food source and for the moisture, but check that any left uneaten does not start to turn mouldy, in which case it must be removed. Once they hatch from their pupae, the adult beetles will then mate and lay their eggs. Within a few weeks, you should start to find tiny baby mealworms in the substrate and as these grow, so you can then use them as a food source.

Before feeding them to the scorpions, transfer the young mealworms back into the original tub, and provide them with a gut-loading food, enriched with calcium and vitamins. This should serve to increase their nutritional value.

Jason Randall, MSC

Livefood for scorpions



Mealworms can be a good source of food for the popular emperor scorpion (as shown here) and other species

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