

# Combating a chameleon killer

One of the major killers of chameleons is dehydration. It is something that all keepers of these fascinating lizards - and particularly those starting out with them - need to be aware of, as Pete Hawkins explains.



**E**ven after a long time of keepers having chameleons, we are still seeing the problems of dehydration in these reptiles. Why is this? This really should not be the case at all, with careful management. But if you give a chameleon a bowl of water, it will not drink from it – they are not conditioned to obtain their fluid requirement in this way.

One of the most challenging aspects of keeping a chameleon is the fact that hydration can be a problematic. They are so sensitive to this issue - far more so than other types of lizard which are commonly encountered in the hobby today.

But we really have no excuse to not keep our Chameleons hydrated. There are a few commonly used methods, and all do the task required. It's ALL about providing the "options for hydration".

## Misting

This can be carried out in various ways, but whether you choose to use an automatic misting system or a manual sprayer, both should be used as necessary, three to four times a day, but personally I think less for veiled chameleons, which, originating from Yemen, do occur in an arid part of the world.

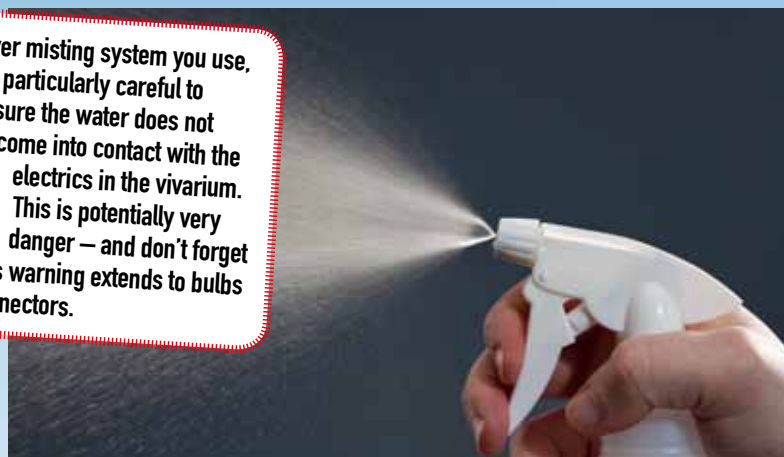
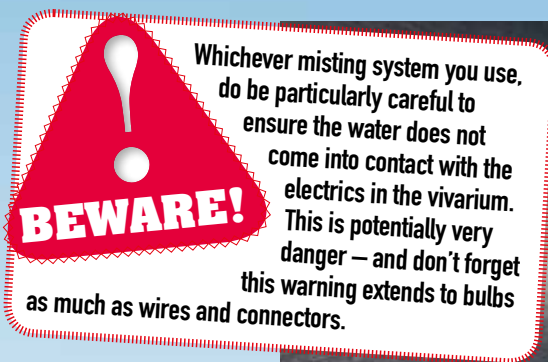
➤ The condition of the eyes can help to signal dehydration.

## Take care!

**I advise using a water conditioner such as ZooMed's Reptisafe, with all tapwater. This will remove the chloramines or chlorine added to drinking water, which is otherwise likely to irritate your chameleon's eyes and potentially giving rise to health issues.**







The advantage of an automatic system is that you do not need to worry about it! Whether you are there or not, it should function, so if you have a busy lifespan and are out for most of the day, this will be the system of choice for maintaining humidity in your chameleon's vivarium.

I personally use the 'Exo Terra Monsoon' automatic system, for two of my vivariums. I've had this system for many years, without any issues at all. Just cleaning the nozzles every few months seems to keep mine in good working order. Now of course, there are a number of misting/rain systems available worldwide. All vary in price. But ultimately, all do the same required job.

I am one for using the best possible equipment for my reptiles. But in this case, when they vary in price by such a huge amount, and yet do the same job, I don't think it's necessary to spend a fortune. I'd recommend choosing one to suit your budget, and in this instance, don't worry about selecting a basic system.

For my other chameleon vivarium, which is located in another room, I use a manual sprayer. It's a pressurised one





where you pump the lever several time, and it will then spray non-stop, for about 30 seconds. This system is equally satisfactory in doing the job, but you need to be there.

Whichever method you use, you'll be wanting to spray so the foliage (whether real or artificial) is nice and wet with warm water. This will allow your chameleon to drink droplets from the water from the foliage, or even the drips from your enclosure walls.

In the wild, they will get much of their hydration from morning and evening dew that is present on plant leaves, as well as from rainfall too, that collects in much the same way. Misting basically fulfils the same function.

I feel it is important to make sure the water is warm to touch on spraying. This appears to be far less stressful for the chameleons. To ensure the water is nice and warm with my automatic system, I use an aquarium heater with an integrated thermostat, often sold as a heaterstat.

I've used this system for years and it really works well. I set the thermostat at a toasty 35°C (95°F). The water will then come out nice and warm, around 25°C (75°F). It's even easier with the manual sprayer as I use cool, boiled water. I found it comes out cooler, and yet is still warm enough not to stress the chameleon.



A male veiled chameleon in the author's collection taking fluid from a manual sprayer.  
Photo courtesy of the author.



One of the author's veiled chameleons drinking from a dripper system.  
Photo courtesy of the author.

## Spraying routine

The first spray should be given at least one hour AFTER lights on, so your chameleon has had time to warm up. And the final spray needs to be at least two hours BEFORE lights off. Plus the enclosure must dry fully between each misting session.

Many chameleons will not like getting sprayed directly in any case. You'll soon find out if yours is one of them when you try a few times. If the chameleon tries to walk away, don't spray it directly – it will only cause unnecessary stress.

The flip-side here is, of course, that others don't mind a spray at all, and they will take the opportunity to have a drink in the process, making this hydration option an easy one. The main method here would be the natural capillary action of water running down the ridges on the lizard's head, and being directed into the mouth. Primitive perhaps, yet effective – this is a characteristic incorporated into the design of some tortoise shells as well.

## Drippers

Another method that can be used alongside misting is the use of a dripper. These are basically a plastic tub/container that you fill with water and place on top of your enclosure (or inside at the top if you have enough room). It will have a small valve that you attach on the front, at the bottom, and then fit a flexible tube to the valve. This allows the tube to expel water at a set rate. Often just a couple of drops every few seconds or a tub with small holes along the bottom.

Again, allowing this to drip on to foliage is the idea. Many chameleons will then lap up the drops that form on the leaves. Alternatively, they may even sit





under the dripper and drink that way as mine do, once they realise this is a water source. Their mouth often opens only a tiny amount. It might not even look open, but it is enough for them to maintain the necessary level of hydration. The same can apply when they are walking through sprayed foliage, and either way, the result will be the same.

### Foggers

Many people ask me about using a fogger. Honestly, this is not a good enough method to provide extended hydration in my experience. If it is set up so the fog rolls over the foliage, it can produce a dew on the leaves that are in direct contact with the fog. So to have a fogger operate just before the lights come on first thing in the morning, can serve purpose, providing a degree of water for hydration at that stage, plus of course, it will raise the humidity, which can itself be a good thing if you require it. But it is just not enough in terms of required output, so I personally wouldn't ever use this as the main hydration option for a chameleon.

### Another possibility

I am a fan of the 'Exo-Terra Plant Dripper', following a little modification in terms of putting the base and the pump in a lunchbox. Cut a small slot out the lid, to allow the plant stem to be submerged and stick out the top of the lid. Drill a few holes in the lid, and the water is protected from dirt, while the dripper plant itself is far more stable.

I incorporate these units into all of my enclosures and they are used daily, mainly in the morning, about an hour or so after the heat and UVB has come on.

Chameleons will not readily drink from standing water either. It may happen very occasionally from time to time, as I've

seen footage in my Facebook group, but it would be a rare occurrence indeed.

### Signs of dehydration.

The most common sign of dehydration in chameleons are "sunken eyes", in the latter stages when the condition is already serious. A chameleon's eyes should fill out the sockets, and not be withdrawn at all. However, this is not an absolutely reliable way of telling if a chameleon is dehydrated, as many individuals will withdraw the eyes when stressed, or even when trying to focus.

You can look for other signs too. As in other lizards, wrinkled skin gives a further clue, as does a slightly shrivelled and sunken-looking casque. Yet for me, the most reliable visual indicator is the colour of the urate element within the chameleon's droppings. This can be summarised as follows:-

- Nice bright white = all good.
- A yellow tinge = could do with a drink.
- Yellow/orange = definitely dehydrated.

### Troubleshooting

Now, getting fluids into your chameleon if there is a problem can be the really tricky bit! The method will need to differ as well, depending on the severity of the condition. Also, if in spite of providing the hydration options mentioned above, your chameleon is dehydrated, then something else could be going on. So please seek a specialist reptile vet's advice without delay. Underlying health issues such as a heavy burden of parasites could be the issue.

A tried and tested method for a chameleon needing a hydration pick-up is the shower. This is just a case of placing his/her favourite plant in the shower, and running a lukewarm spray at the wall opposite the plant. This allows a fine mist to land on both the plant and your

chameleon, giving the lizard an opportunity to drink. This is a long process though. It will often take a good 15-20 minutes before your chameleon decides to drink. So take your time. It's worth it.

One final method, which is often overlooked, in terms of hydration is livefood. Make sure that your crickets have plenty of greenstuff for example. If you keep your live food fully hydrated, then that water will be passed on to your chameleon. Simple? Yes, but also remember that on the other side of the coin, a chameleon that is not eating well will be more vulnerable to dehydration as a result.

### In conclusion

If you have a chameleon that is problematic in terms of fluid intake, be prepared to experiment and try all the different methods mentioned, until you find one that works. Even the humble syringe or pipette can solve the problem, but take great care not to spurt water into the lizard's mouth, as this could choke it. Don't forget the help that a specialist vet can provide, in terms of addressing dehydration either.

Obviously though, the key thing is to try to avoid the problem arising in the first place if possible, so provide plenty of choices which will enable your chameleon to keep itself well-hydrated. Always keep a close watch too, so you can be sure that your pet is drinking regularly, as this can be the easiest way of checking all is well with the chameleon. ❖

▲ Live food can help to keep a chameleon hydrated.

▼ Maintaining the correct humidity and ensuring the chameleon is adequately hydrated will be vital for a healthy shed as well..

