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ESSENTIAL CARE & EQUIPMENT



Lighting

There are three facets of light that are important for the reptile keeper to consider: ultraviolet light (UVA & UVB), visible light and infrared light. Appropriate and high quality lighting must be used to maintain health and vitality and Exo Terra has developed several specialised lights to meet these needs.

Linear Fluorescent Bulbs

Fluorescent lighting is used primarily to satisfy a reptile's requirement for visual light and UVB radiation. It is recommended to combine a high UVB output (Repti Glo 5.0 or 10.0) with a very high visual light output (Repti Glo 2.0).

Exo Terra Repti Glo fluorescent bulbs are available as linear tubes in a number of lengths or as a self ballasted compact lamp.

Fluorescent bulbs lose much of their UV output within 1 year and so should be replaced every 12 months to maintain your reptile's health.



Repti Glo 2.0

Ideal spectrum for all reptiles and amphibians
High visible light output
Stimulates appetite, activity and reproductive behaviour



Repti Glo 5.0

Ideal for all tropical and sub tropical species
High UVB output
Provides necessary UVB rays for optimal calcium metabolism



Repti Glo 10.0

Ideal for all desert dwelling species
Ultra high UVB output
Provides necessary UVB rays for optimal calcium metabolism



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Compact Fluorescent Bulbs

Visual Light Bulbs

Exo Terra's visual light bulbs have been designed with specific wavelengths to suit a reptile's vision creating an ideal visual spectrum for that organism, supplying them with light to see properly and indicating day and night time.

Reptile Vision



Natural Light



Natural Light Ion



UVB Fluorescent Bulbs

The most important feature of a fluorescent bulb is the ability to emit sufficient UVB light (ultraviolet B), a component of sunlight. Exo Terra's UVB fluorescent bulbs are classified according to their percentage of UVB output.

Repti UVB 100



Repti UVB 150



Repti UVB 200



NEW! UVB BUDDY FREE APP FOR iPhone 4 & 5

Use UVB Buddy to choose the right Exo Terra UVB bulb for your animal, at home or on the go!



Mercury Vapour & Halogen Bulbs

The Solar Glo self-ballasted mercury vapour lamp provides light, heat, UVA and UVB radiation in one easy to install bulb, making it the choice of the professional reptile keeper.

Long lasting Sun Glo halogen bulbs provide a broad spectrum light with a natural, white light.



Incandescent Bulbs

Exo Terra incandescent bulbs are available in various forms to provide light and/or heat to create essential basking areas for your reptiles. Most lamps use a special glass to create a natural, balanced light. Lamps are manufactured using coloured glass, preventing the cracking or fading as seen in coated bulbs.



FOR MORE INFORMATION ON LIGHTING

Visit www.exo-terra.com or point your smartphone's QR code reader at this code

See the Exo Terra lighting video on Exo Terra TV at www.exo-terra.com



Fixtures

The fixture is an important aspect of the lighting and heating system, ensuring the safety and proper function of the applied light or heat source.

Fluorescent Light Controllers

The Exo Terra Light Units are the most flexible solution for fitting all types of linear fluorescents tubes onto any type of terrarium. All units come with a double fitting to enable the combination of different Repti Glo bulbs in order to obtain the right light output depending on the species and climate. The Exo Terra Light Cycle Unit also has a timer and a linear fluorescent bulb dimmer built in.



Light Dome

Perfect for use with Exo Terra Terrariums, its small size fits neatly on the top screen cover. The highly polished aluminum reflector increases light, UVB and UVA output by up to 100%! The ceramic socket can accommodate either compact fluorescent bulbs or incandescent bulbs. Combine multiple fixtures with specific light bulbs to create the ideal lighting system.



FOR MORE INFORMATION ON LIGHT FIXTURES

Visit www.exo-terra.com or point your smartphone's QR code reader at this code
See the Exo Terra lighting video on Exo Terra TV at www.exo-terra.com



Heating

Reptiles and amphibians are cold blooded so a proper heating system is vital. In nature, reptiles derive heat from the sun and from heated ground surfaces. In the terrarium, heat should be provided in a similar way, by using an overhead heat source to simulate the sun's rays and a heat rock to simulate a heated surface, allowing animals to effectively regulate their body temperature.



Establishing a Thermal Gradient

For basking reptiles such as snakes and lizards it is important to establish a thermal gradient within the terrarium. This means that one end should be warmer than the other to allow the reptile to increase or decrease its body temperature as required. Install your overhead lamp or heater at the same end of the terrarium as your heat rock or mat and install two thermometers to monitor the temperature at both ends of the habitat.



Example thermal gradient in a bearded dragon terrarium

Ceramic Heater

Overhead heat can be provided with an Exo Terra basking lamp. If only heating is required without light however, a Heat Wave Lamp may be used. The ceramic design is 99% heat efficient and is suitable for desert or rainforest environments. Only to be used with Exo Terra wire lamp holder.



Heat Wave Mat

The Desert substrate heater simulates heated sand beds by the sun in deserts. The amount of hours a day and the strength of the sun in these regions can generate extreme hot surfaces. The substrate is dry and does not increase the air humidity as seen in rainforests or tropical areas. The power of the Heat Wave Desert substrate heater is designed to safely create these conditions in the terrarium. Ideal for use with Vivexotic Tortoise Table and Snake-Stax.

Must only be used under glass, not suitable for use directly on wood.



FOR MORE INFORMATION ON HEATING

Visit www.exo-terra.com or point your smartphone's QR code reader at this code



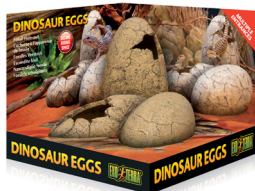
Decor & Substrate

The Exo Terra range includes replica plants, vines, branches, rocks, hide-outs and caves to make your reptile feel at home.

Proper substrate is important to stimulate natural behaviour. Always use substrates designed specifically for terrarium use to guarantee your reptile's wellbeing.

Natural Look Rock Decor

Exo Terra rock decor is perfect for any terrarium. Made from durable resin, all items are easy to clean and have an incredibly realistic natural rock finish. A huge range of bowls, dishes, insect feeders, hide out caves, waterfalls and dens allows you to furnish your terrarium with one, co-ordinated range.

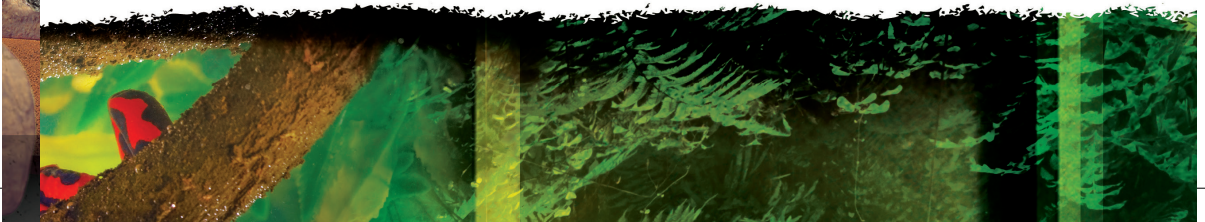


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Plants, Vines and Branches

Not all terrarium conditions allow live plants to grow. Some areas are too hot or too dry whereas others may require different lighting or be eaten by the reptiles. Exo Terra's artificial plants are exact copies of their natural counterparts and are easy to maintain. Twisty, bendable Jungle Vines and natural, heat treated Forest Branches provide climbing space for arboreal reptiles.



Substrate

Substrates play an important role in maintaining a terrarium's micro climate and stimulating natural reptile behaviour. Exo Terra's substrates are all made from natural materials.



Snake Bedding

Exo Terra Snake Bedding, a biodegradable reptile substrate made from sustainable untreated wood, is ideal for breeders and professional reptile keepers. Exo Terra Snake Bedding is dust-free and extremely soft, making it perfect for even the most sensitive species and hatchlings. Its high absorption rate (3:1), combined with its fast drying properties, make this 100% natural bedding very low maintenance.



**FOR MORE INFORMATION ON DECOR,
PLANTS AND SUBSTRATES**

Visit www.exo-terra.com or point your smartphone's QR code reader at this code





Breeding Boxes

The special feeding door at the front of the lid allows access for feeding and watering, even when the units are stacked. This makes feeding easy and prevents stress since the unit does not have to be moved in order to access it. The angled ventilation provides an optimal air-flow at all times, even when the unit is stacked.



FOR MORE INFORMATION ON BREEDING BOXES

Visit www.exo-terra.com or point your smartphone's QR code reader at this code



Foods

Species specific nutrition for healthy and thriving animals. The black container protects vitamins and amino acids for a nutritious meal every time.

Soft Pellet Food

Exo Terra Soft Pellet food is a delicious reptile diet, carefully formulated to ensure proper growth and health by providing complete and balanced nutrition. The diet contains natural plant and fruit ingredients which provide complete daily nutrition. Exo Terra Bearded Dragon food is fortified with optimal levels of vitamins, minerals and amino acids so no other food supplements are required.



FOR MORE INFORMATION ON FOOD

Visit www.exo-terra.com or point your smartphone's QR code reader at this code





Individual Care Guides

There are some excellent books on keeping reptiles and you should purchase one or more of these to read before you buy your pet. You should also consider joining your local reptile society who will be happy to offer help and advice.

Don't forget to register your new pet with a local Vet. You can find your local Veterinary practice and what species they treat at www.findavet.org.uk. Many general practices now treat reptiles, or they can refer you to a more specialist Vet if required.

For further information check out the following websites:

The Federation of British Herpetologists: www.f-b-h.co.uk

Exo Terra: www.exo-terra.com

We gratefully acknowledge the assistance of Chris Newman, REPTA and The Federation of British Herpetologists in the preparation of this guide.

Salmonella: Like all living things reptiles can carry the naturally occurring bacteria Salmonella, which can be acquired by ingestion (via the mouth). Good hygiene is therefore very important when keeping any animal. Remember, you are more likely to acquire Salmonella from raw chicken meat, a stale cream cake or a dog, so don't automatically assume that your reptile is the only suspect! Always wash your hands after handling ALL animals.

Five Things to Consider before acquiring your new pet:

- Have you carried out adequate research into the animal's care needs?
- Are you comfortable with the feeding requirements of the animal?
- Can you obtain food easily from your local pet shop?
- Are the rest of the family happy to live with the animal?
- Who will look after your new pet if you are away?

Never release an animal brought as a pet into the wild, it is illegal and never in the best welfare interests of the animal. Release of non-native species can be damaging to the environment.

The following pages include care guides for the five most common reptiles sold in the UK. Scan the QR code to download the PDF care guide to your smart phone.



EXO TERRA CARE GUIDE No. 1

Corn Snake

The Corn Snake

Latin name: originally Elaphe guttata (now Pantherophis guttatus)

Corn snakes belong to the Colubrid family, the largest snake family. As hatchlings, they normally measure 20-28cms (8-11in). Adults range from 1-1½ m (3-5ft) with males generally being longer than females. Their lifespan is up to 20 years and they are non venomous.

Facts & Information

Origin: Corn Snakes are native to the South Eastern United States, where they are found in open woods and grassland. They are common around farms and in cornfields, where they help to control rodents.

Benefits of keeping: Corn snakes are hardy and easy to keep. They are docile and even tempered and well-suited to captive conditions. They become tame with regular gentle handling. They do not grow very big compared to other species and are the ideal first snake.



Corn snakes are beautiful, dramatic-looking snakes, they have a background colour of orange, with black-bordered irregular red or rust coloured patches. Their belly is white with black squares on it. However, due to the ease with which they breed in captivity, many colour variations are now available, including blood red corns, striped corns and albino corns.

Housing: It is advisable to start with a small pen such as an Exo Terra Faunarium for a hatchling, as Corn snakes are the “Houdini” of the snake world. They will find a way out of the tiniest hole, so a plastic container is best initially. This can be placed inside an Exo Terra Terrarium to ensure the correct temperature and then move them into the terrarium itself when they grow to about 60cm (2ft) at about 1 year old.



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Corn snakes can be housed together or separately, although some males will object to sharing a vivarium with another male. Females can be housed together but should be separated for feeding as animals frequently compete for the same food item and may even try to eat each other!

Substrate and Furnishings: Bark or wood shavings are ideal as a substrate. It is a good idea to provide a hide at both the cooler end of the terrarium and the hotter end so as to give the snake a choice of warm security or cooler security. The Exo Terra Snake Cave is perfect for this, or a Reptile Den which sticks to the glass, allowing you to look at your snake without disturbing them. If rocks are to be used to decorate the terrarium then ensure that there are no sharp edges, and that they cannot fall and crush your snake. A climbing branch would be appreciated by the snake and artificial plants and other terrarium décor will enhance the appearance of your set-up. Remove all droppings and clean the terrarium on a regular basis to prevent disease.

Heating: Corn snakes need a hot area of about 90 F (32 C) with a background daytime temperature of 80 F (27 C). At night, the temperature should drop to about 70 F (21 C). One of the best methods of heating for Corn snakes is an Exo Terra Heat Rock. Choose an appropriate size for your terrarium and position towards one end of it. This allows for the required temperature gradient. A digital thermometer should be placed near the hot end and one at the cool end of the terrarium to check the temperatures are correct.



EXO TERRA CARE GUIDE No. 2

Bearded Dragon

The Bearded Dragon *Latin name: Pogona vitticeps*

Bearded dragons are lizards of the Agama family. They are about 7 cm (3inches) long when they hatch and grow to their adult size of 45-60cm (18-24in) in about 1 year. Females are normally smaller than males. They come in a wide variety of colours including shades of brown, grey and orange. Bearded dragons are so called because their spiny throat projections look similar to a human beard. The male's beard is typically darker than the female's and it can be puffed up in a display of dominance. Their lifespan is 8 – 10 years.

Facts & Information

Origin: Bearded dragons are native to Central Australia, where they are found in semi-arid woodlands and rocky deserts. They are skilled climbers and spend the morning and evening basking on an exposed rock or branch. They take refuge from the hottest part of the day.

Benefits of keeping: Bearded dragons adapt well to being handled and are one of the easiest lizards to tame. Gentle, regular handling of young ones is beneficial, as a dragon will learn to recognize its keeper. They are hardy and relatively easy to keep. They have good activity levels during the day and an out-going personality with interesting social behaviour. Males “head bob” rapidly in a display of dominance, while females respond with a slower head bob. Both sexes will wave with a front leg to appease more dominant animals. All of this makes them one of the best lizards for beginners to keep.



Housing: A larger Exo Terra Terrarium is suitable for 1 or 2 young bearded dragons. They can be kept singly, in pairs or in groups, with only one male per group as they will fight. Males are slightly larger than females and have a row of enlarged femoral pores running along the inner thigh. Groups will live happily together in larger enclosures while hatchlings up to 4-5 months old may be kept in a smaller terrarium.

Substrate and Furnishings: Bearded dragons need a desert environment, so Exo Terra Desert Sand is ideal as a substrate. Remove all droppings and clean terrariums on a regular basis to prevent disease. Dragons do climb and logs and rocks make good basking areas, as long as they are fixed securely. A hide or something to shelter behind is essential. This helps to prevent stress and allow the bearded dragon a safe haven from the outside world.

Heating: A daytime basking area of around 100°F (38°C) is essential, as are cool areas ranging from 68-84°F (20-29°C) Note: No extra night heat is needed for adult dragons if the room stays above 16°C



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(60°F). A basking lamp is the best heat source as dragons are attracted to light; Exo Terra Sun Glo Basking Spotlights are suitable, set on a timer to give 12 hours light and heat per day.

Larger enclosures may need ceramic heaters as well. Wire mesh guards should be fitted over all heat sources used in order to prevent thermal burns. An Exo Terra Heat Rock may also be used. Choose an appropriate size for your terrarium and position towards one end of it, underneath the Repti Glo 10 bulb and basking lamp. This allows for the required temperature gradient. Digital thermometers should be placed near the basking spot and at the cool end of the terrarium to check the temperatures.

In the autumn and winter, as daylight hours shorten, some adult Bearded Dragons seek cooler areas and become dormant for weeks or even months (this is called brumation). Feeding will cease and once they have begun to sleep all day, background temperatures may be safely reduced to 60-70°F (16 - 21°C) and basking lamps turned down until the dragons awaken and start basking and feeding again in early spring.

Lighting: As well as needing good bright lighting in the form of a spotlight, dragons need ultraviolet light (UVA for normal vision and activity levels and UVB for normal calcium metabolism), which must be supplied by specialist reptile UV lamps or tubes. A high-UVB fluorescent tube, such as Exo Terra Repti-Glo 10.0 ideally fitted with reflectors, should be used to supplement the lighting. These should also be fitted to a timer to give 12 hours light/day. These must be replaced every year, even though they may look fine, as all fluorescent bulbs lose their UV radiation within one year. Exo Terra canopies provide an easy solution to lighting your terrarium.

Water: A shallow bowl of clean water must always be provided. Dragons can take time to learn to drink from a dish. As they are attracted to water movement, a dripper system may work, or they can be regularly offered a syringe filled with water, dripped on the lizard's head or in front of its nose. This way they learn to lap from the nozzle. Babies can be gently sprayed and will drink the droplets.

Diet and Feeding: Bearded dragons are omnivorous. A balanced diet must include green leaves (eg. spring greens, kale, dandelion, watercress) vegetables (eg. chopped red pepper, peas, grated butternut squash, carrot) insects (eg. black or brown crickets, locusts, mealworms) Feed juveniles twice daily; offer adults fresh green food daily and insects every 1-2 days.

As an occasional treat, fruit can be given (eg. apples, bananas, kiwi, grapes). Too much can cause diarrhoea. Baby dragons can become seriously impacted (gut blockage) by large insects and should be fed only small crickets no bigger than the distance between the dragon's eyes. They should not be fed mealworms.

All insects should be well fed so that they contain maximum nutritional value when fed to the dragons. They normally come with food, such as bran, in the container. Once or twice a week, before offering them to the lizards, insects should be dusted with good quality reptile mineral/vitamin supplement powder. Exo Terra cricket feeders are perfect as a container to dust them in and then use to allow slow release into the terrarium. Dragons will benefit from having a small dish of calcium (calcium carbonate powder or grated cuttlefish) in their terrarium.

Exo Terra make a complete dry pellet diet for both Juvenile and Adult Bearded Dragons.

Shedding: Bearded dragons shed their skin naturally as they grow. This will be up to 8-10 times in the first year and several times a year after that. They go off their food for a few days before shedding. It will peel off in strips. Misting them with water will help with this process.



EXO TERRA CARE GUIDE No. 3

Leopard Gecko

The Leopard Gecko *Latin name: Eublepharis macularis*

Leopard Geckos are about 6cm (2.5in) long when they hatch and grow to an adult size of 20-25cm (8-10ins). Their common name comes from the adult colouration of the wild species, which is normally yellow/cream with black spots. Leopard Geckos are one of the few gecko species with eyelids, hence their Latin name (Eublepharis = "Good(True) Eyelid"). A healthy gecko has a fat tail, and you should avoid buying one with a thin tail. Their lifespan is 8 years or more.

Facts & Information

Origin: Leopard Geckos are native to Pakistan, Afghanistan, India and Iran, where they are found in harsh, arid mountain and desert regions. They are nocturnal, ground dwelling lizards and they take cover during the heat of the day. They do not have the adhesive toe pads of other geckos.




Benefits of keeping: Leopard Geckos are ideal lizards for the first time keeper as they do not grow particularly big, are very hardy, easy to keep and very attractive looking. They are ideal for older children as they are placid and soon become accustomed to handling. They require little maintenance and the overall costs involved are low which also makes them highly recommended for beginners.

Leopard Geckos have been bred in captivity for many years resulting in many interesting colour variations and are the most common lizard kept. Rough handling can occasionally cause a Leopard Gecko to shed its tail and while this will re-grow in time, it will not look as nice as the old one.

Housing: It is possible to start with a small pen such as an Exo Terra Faunarium for a hatchling and then upgrade to a Terrarium when they grow larger. They can be kept singly, in pairs, or in groups, but as males are aggressive, only 1 male per group. There is only slight difference between male and females in appearance. Males are slightly more heavy-bodied and have a row of enlarged femoral pores running along the inner thigh.

Substrate and Furnishings: As these geckos originate from very arid conditions it is important to provide a suitable environment. Exo Terra sand is ideal as a substrate. Larger stones can be added to create a more realistic rocky, desert terrain.

At least one hide per gecko should be included, as it is important that they have the option to hide and have their own space if required. Remove all droppings and clean the terrarium on a regular basis to prevent disease.



Heating: Leopard geckos need a hot area of about 90 F (32 C) with a background daytime temperature of 80 F (27 C). At night, temperature should drop to about 70 F (21 C). This is when they move about most and feed.

One of the best methods of heating for Leopard Geckos is an Exo Terra Heat Rock. Choose an appropriate size for your terrarium and position towards one end of it, underneath the basking lamp if used. This allows for the required temperature gradient. A digital thermometer should be placed near the hot end and one at the cool end of the terrarium to check the temperatures are correct. A light source, such as a SunGlo Basking Light could also be used as a heat source. This should be fitted to a timer to give 12 hours light/day and this will help with the temperature drop required at night time.

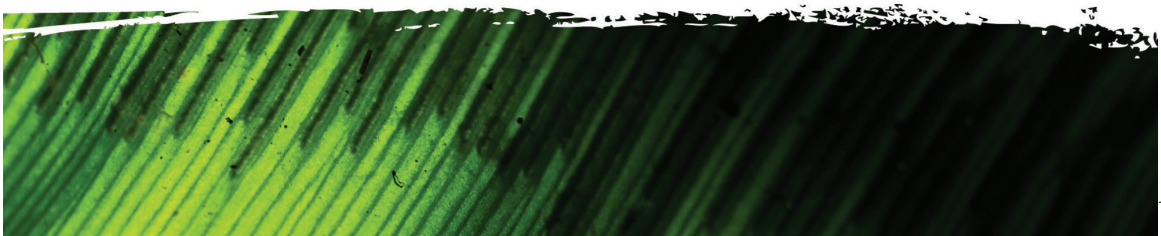
Lighting: Unlike many reptiles, they do not need special UVA or UVB lighting as they have developed to be mostly nocturnal. In fact, too much UVB can cause them eye problems. An incandescent daylight bulb (Sun Glo) or a ReptiGlo 2.0 fluorescent tube, set on a timer to give 12 hours daylight, can be used. (The ReptiGlo 2.0 does not have high levels of UVB). A Night Glo bulb could be used to assist nocturnal viewing if desired. Exo Terra canopies provide an easy solution to lighting your terrarium.

Water: Geckos do not require much water, but a shallow bowl of clean water should be provided. Young ones can be gently sprayed and will drink the droplets.

Diet and Feeding: Feeding Leopard Geckos is very easy. They will take a wide variety of insects, crickets are their main food but they will also eat small locusts, wax worms and mealworms (only feed the latter in small quantities). Feed baby geckos a good meal every other day and adults two/three times a week. It is important not to over feed and to make sure that all the food has been eaten before you offer more. Make sure the crickets you feed are not too big, a good guide is to feed ones no bigger than the distance between the gecko's eyes.

All insects should be well fed so that they contain maximum nutritional value when fed to the geckos. They normally come with food, such as bran, in the container. Once a week, before offering them to the lizards, insects should be dusted with good quality reptile mineral/vitamin supplement powder. Exo Terra cricket feeders are perfect as a container to dust them in and then use it to allow their slow release into the terrarium. Leopard geckos will benefit from having a small dish of calcium (calcium carbonate powder or grated cuttlefish) available at all times.

Shedding: The most common problem with Leopard Geckos is with skin shedding. Like all reptiles, Leopard Geckos shed the outside layer of skin regularly but, unlike snakes, the discarded skin is normally eaten and is rarely seen. On occasion, however, the skin can become stuck around their toes or eyes. If you see your gecko is having problems shedding give it a spray with tepid water, or place it in a separate box with some damp kitchen roll. If this does not work seek further advice from your pet shop, reptile society or breeder. A shedding box with damp moss or vermiculite should be provided and could also double up as an additional hide



EXO TERRA CARE GUIDE No. 4

Hermann's Tortoise

Hermann's Tortoise *Latin name: Testudo hermanni*

Hermann's tortoises are one of the smaller Mediterranean tortoises, belonging to the same Genus (*Testudo*) as the Greek tortoise and the Marginated tortoise. Hatchlings are around 4cm (1½in) in length and they grow annually to a maximum adult length of about 20cm (8in). Their lifespan is 70 years or more.

Facts & Information

Origin: They originate from the Northern shores of the Mediterranean and spread northwards into central Europe through suitable habitat areas. They like arid, rocky hills and scrubland.

European tortoises are protected by EU and global law. Only captive bred ones should be bought. They must be sold with an Article 10 Exemption Certificate, which should be kept throughout their lifetime.




Benefits of keeping: They are ideal tortoises for the first time keeper, being fairly hardy and doing well in our UK climate, with a little care and attention at certain times of the year. They can be quite sociable and are easily handled. A well thought out tortoise pen is an attractive addition to any garden. Initial cost to buy is high, although maintenance and feeding is straightforward and inexpensive. Unlike most pets, where their short lifespan is a problem, tortoises are extremely long-lived.

Housing: Hatchlings and young tortoises can be housed indoors in a Terrarium or an open topped container. They should be given access to an outside pen on warm days. Adults kept outside in a secure wooden pen should have access to full sun, with retreat areas to give security and shade. They should be brought indoors in winter and hibernated in a box if appropriate.

Substrate and Furnishings: Hatchlings housed inside are best kept on a substrate of newspaper, bark chips or beech chip that is easily changed when soiled. Some form of hide should be provided. This could be something quite simple, like a handful of hay that the tortoise can burrow into and make itself feel a little more secure.

A mix of ground surfaces would be appreciated by your tortoise, perhaps both a small paved area and an area of grass, with shade and cover provided by low-growing shrubs. A simple overnight box that gives protection from rain and cold and easily accessed by your tortoise as and when it wishes, should be provided. This should be filled with hay.



Heating: For hatchlings indoors, a background temperature of about 70F (21C) with an overhead heat bulb 15-30cm above your tortoise, providing a basking spot of about 90F (32C) at one end of the housing would be ideal. Ensure that your tortoise can move away from the basking area and sit in a cooler area of the cage if it wishes. The basking lamp, such as a SunGlo Daylight Basking Lamp is necessary to mimic the heat of the sun and should be left on for 13 hours a day. Any electric heating device must be controlled by an appropriate thermostat. It is advisable to have a thermometer at each end of the terrarium, so it is easy to monitor the temperature at both the warmer and cooler end.

For adults housed outside, no additional heating is required if the pen gets full sun for part of (or most of) the day. You could also provide a warmer spot using a sheet of glass over part of the pen to maximise the heat of the sun. Again, they must have an area of shade that they can retreat into as required.

Lighting: Tortoises need UVA and UVB light for healthy shell and bone growth. While they will get this naturally from sunlight if in an outdoor pen, for tortoises housed indoors a fluorescent UVB source, such as Repti-Glo 5.0, is essential. These must be replaced every year, even though they may look fine, as all fluorescent bulbs lose their UV radiation within one year. A Daylight Basking Lamp should also be used, as mentioned above.

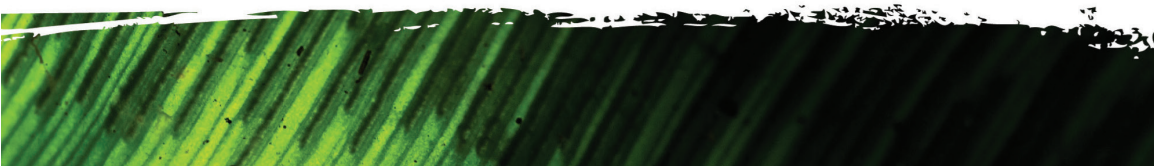
Humidity: Humidity should be avoided with Hermann's tortoises as a damp habitat can increase the risk of breathing problems. Water spillages should be mopped up and the housing should be well ventilated, without draughts.

Water: A shallow dish of water must be available at all times for your tortoise to both drink from and bathe in as it wishes. The dish must be selected carefully to avoid frequent spillages, which would increase the humidity, and to ensure that the tortoise can climb both in and out of the dish. An Exo-Terra water dish is ideal. It is a good idea to periodically give your tortoise a 10 minute bath in shallow tepid water

Diet and Feeding: Hermann's tortoises are herbivores and should not be fed any meat product or derivative. Ideally you would be able to fresh pick food daily from your garden that has not been treated with any pesticides. The staple diet is dandelion leaves, flowers and stalks but, for variety, you could also offer plantain, clover, convolvulus, and honeysuckle. Cabbage, kale, cucumber, courgette, watercress and the occasional tomato, kiwi, etc. will also all be taken by your tortoise. Some garden plants are poisonous, so check before giving anything else. All food should be well washed in cold water to remove any pesticide residues. Calcium carbonate (limestone flour) and a good vitamin/ mineral supplement should be added to food items.

Exo Terra make a nutritionally complete pellet diet for Adult tortoises (not juveniles). Every day you should remove any uneaten food and waste matter and offer fresh food and water.

Hibernation: Tortoises will hibernate for several months over the winter (for longer as they get older). Their heart rate and breathing drop considerably. It is vital that tortoises are only allowed hibernated if they are completely healthy and have enough body reserves to last the winter, or they will die. There are recognised length:weight ratios to help work this out. They should be checked and weighed by a vet or reptile expert before deciding to hibernate them. They should be kept in an insulated wooden box, kept at about 5C, with a maximum/minimum thermometer to check the temperature. It must not reach freezing point. It is vital to get detailed information about how to hibernate them and what to do when they awaken, to avoid serious health problems.



EXO TERRA CARE GUIDE No. 5

Veiled Chameleon

Veiled Chameleon *Latin name: Chamaeleo calyptrotus*

The veiled or Yemen chameleon belongs to the family Chamaeleonidae: a distinctive and highly specialized group of lizards restricted to the Old World. They are distinguished from other lizards by their parrot-like (zygodactylous) feet and independently mobile eyes. The other unique feature shared by all chameleons is their rapidly extrudable tongues, which may be as long as their body length. Chameleons are also renowned for their ability to change colour.

Male veiled chameleons grow to total length of about 50cms (20 inches) including tail, whilst females are smaller, reaching only 35cms (14 inches). The lifespan is around 4-8 Years, with males usually living longer than females, although both are quite short-lived compared to many other reptiles.



Facts & Information

Origin: Veiled chameleons originate from the mountain regions of Yemen, Saudi Arabia and United Arab Emirates.

Benefits of keeping: Veiled chameleons make excellent and fascinating pets, but unlike bearded dragons, they are not “hands on pets” and will prefer to be left to their own devices in a vivarium. Like all chameleons, they are solitary animals and must be kept on their own, adults only come together for breeding and then only for very short periods.

Chameleons are often portrayed as difficult animals to keep and some of the 160 or so species known have complex needs which may be troublesome to replicate. Veiled chameleons have adapted very well to captivity and although they do have specific requirements they are a very easy species to keep. In fact, more veiled chameleons are actually kept and bred in the UK than exist in the wild!

Housing: Veiled chameleons require an arboreal enclosure with more height than floor space and a terrarium or vivarium of 90cm x 60cm x 45cm is suitable for an adult. Good ventilation is a critical requirement for this species as stagnant air can cause a lot of health problems for your chameleon. If using a melamine vivarium, it is important to choose one that has been specifically designed to allow for the extra ventilation required.

Substrate and Furnishings: Veiled chameleons are highly arboreal (they live in trees and love climbing) and rarely venture onto the ground, so plenty of climbing facilities should be incorporated into the enclosure and they also like lots of foliage to hide in. Live plants can be used but it is important that only non-toxic varieties are used as lizards may try to eat them [see below]. It is also important that any plants used must not have sharp spines, so it is often more practical to use artificial plants.

Choice of substrate is down to personal choice and some keepers may prefer not to use any at all. There are



a good range available: Exo Terra Forest Moss, Plantation Soil, Jungle Earth and Forest Bark are all suitable. Substrates should be changed regularly.

Heating: A daytime basking area of around 95°F (35°C) is essential, as are cool areas ranging from 68-84°F (20-29°C) although no extra night heat is needed for veiled chameleons if the room stays above 16°C (60°F). A basking lamp is the best heat source as chameleons do like to bask. Exo Terra Sun Glo Basking Spotlights are suitable and should be set on a timer to give 12 hours light and heat per day.

Two thermometers should be used so that a careful check can be made of the basking area and the cooler area of the enclosure.

Lighting: As well as needing good bright lighting in the form of a spotlight, veiled chameleons also require ultraviolet light (UVA for normal vision and activity levels and UVB for normal calcium metabolism), which must be supplied by specialist reptile UV lamps or tubes. A high-UVB fluorescent tube, such as Exo Terra Repti-Glo 10.0, ideally fitted with reflectors, should be used to supplement the lighting and may be fitted to a timer to give 12 hours light/day. These must be replaced every year, even though they may look fine, as all fluorescent bulbs lose their UV radiation within this time.

Water: Unlike most other species of lizards, chameleons do not take water from a water bowl and will only drink from moving water which is a very important issue to bear in mind when keeping them. Water should be provided by misting the enclosure twice a day to allow your chameleon to take moisture from the droplets on the plants and branches. The Exo Terra Monsoon Misting System is ideal as it automates the process, perfect if you are out in the day. Alternatively a drip system can be used to meet your chameleon's moisture needs.

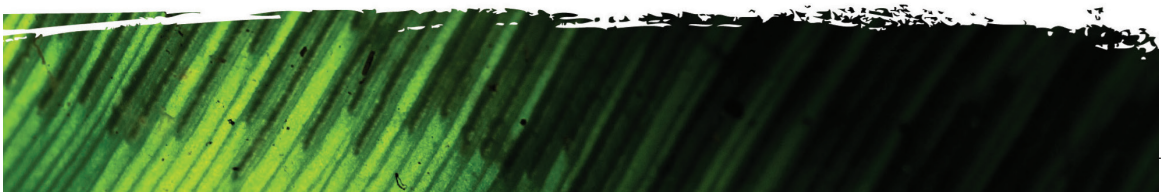
Diet and Feeding: Veiled chameleons are unique amongst chameleons in being omnivorous. As well as the normal insects, they will take as some plant material, such as dandelion leaves, cabbage, turnip greens, nasturtiums, broccoli, apples, green beans, carrots, melon, peaches and bananas (with skin). Not all veiled chameleons will take plant matter, so if your chameleon rejects any offerings do not be concerned.

Young chameleons should be offered food twice daily. Only offer as much food as the animal will take and try not leave uneaten insects in the cage. Food should be of appropriate size for the animal. As guidance, the length of the food should be roughly equal to the width between the chameleon's eyes. Adult chameleons can be fed daily but it is recommended that they should miss one day a week.

Suitable insects are crickets, locusts, waxworms, giant mealworms etc. All insects should be well fed so that they contain maximum nutritional value when presented to the Chameleon. They normally come with food, such as bran, in the container. Once or twice a week insects should be dusted with a good quality reptile mineral/vitamin supplement powder before offering them to the lizards.

Shedding: Veiled chameleons shed their skin at regular intervals as they grow. The old skin is pushed off in patches and is normally eaten by the chameleon. Your veiled chameleon should go through this process every 3-4 weeks as a juvenile, dependant on its rate of growth, but less frequently as an adult. Prior to sloughing, your veiled chameleon may become disinterested in food and its skin may take on a dull or milky appearance. Shedding may take just a few hours when your chameleon is young, but last over several days as an adult, so do not be alarmed if it is taking longer than you would normally expect.

Most veiled chameleons will shed without any need for extra help, but if you want to assist your veiled chameleon during this time you should try to raise the humidity in the vivarium to help it loosen its skin. You can do this by lightly misting the tank with water more frequently than you would normally.



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