

Bearded Dragons



About: The Central or Inland Bearded Dragon (*Pogona vitticeps*) is one of the most common reptiles in the pet trade market today due to their great disposition and ability to be handled. They are flat bodied lizards with a broad head and a "beard" under their chin that can turn black when agitated or ill. They are a semi-arboreal species originating from Australia and can be found in arid, subtropical woodlands and savannah type habitats. Bearded dragons can be found basking in bushes, branches and on rocks throughout the day. It is not unusual for bearded dragons to burrow under the soil to escape the heat and for protection at night.

Enclosure: While bearded dragons start out very small, they do grow quickly. You can probably get away with using a 20 gallon tank in the first few months but be prepared to upgrade soon after. An adult bearded dragon can grow to 12-24 inches from nose to tail tip. A 40 gallon breeder tank would be the minimum size for an adult bearded dragon. Ideally the enclosure should be no smaller than 4ft x 2ft x 2ft. Bigger is often better for these guys. Custom enclosures can be built out of expanded PVC sheeting, melamine, or wood as long as it is properly sealed against water. There are a variety of resources online you can use to build and seal your own enclosures. Ventilation is important in bearded dragon enclosures. Proper air movement through the area will allow for better temperature regulation and stops humidity from building or mold from growing. Logs and branches are great for your bearded dragon to climb on. These and large rocks can double as a basking spot. The log can also be used an area for your bearded dragon to cool off or hide. A water bowl, large enough for the dragon to fit in, and a food bowl should be provided. A variety of other types of items can be used to decorate your enclosure.



Outdoors: If you choose to take your bearded dragon outside during the warmer months they need to be supervised. Make sure no pesticides are used on your lawn; bearded dragons will taste everything in their environment, including grass, and will eat any insects they find outside. There are options for building outdoor enclosures for your beardie; examples can be found online. Do not keep your bearded dragon in a glass enclosure outside, the glass will over heat quickly in the sun and they can die of hyperthermia. If you don't plan on using an enclosure when taking your bearded dragon outside you can put them on a harness and leash so there is minimal chance of them escaping. Beardies can move pretty quickly when they want to!



Substrate: We DO NOT recommend keeping bearded dragons on a pure sand or Calci-sand substrate. Even though items such as Calci-sand are marked as digestible, they are not. Sand impactions are a common ailment of bearded dragons in captivity and can be fatal. If you are interested in a soil based substrate, a combination of top soil, play sand, and orchid bark can be used. Proper research needs to be done before putting your bearded dragon on a soil or bioactive soil substrate.

Repti-carpet is a fine substrate for bearded dragons. We suggest having two or three carpets cut to the size of your enclosure which can easily be changed out when soiled, to allow for proper cleaning and drying. Ceramic tiles are a popular option for your enclosure. They are easy to clean and relatively easy to source as well. Home Depot and Lowe's will carry tiles; if you don't care that all the tiles aren't exactly the same, you can collect sample tiles generally at no cost. You can also custom size your tile to get one or two large pieces for your enclosure. Unless you plan on sealing the cracks, cleaning can be a bit tricky if urates or stool slides between a few

pieces. Newspaper, paper towel or butcher paper are viable options as well. These make it much easier to clean.



Temperature and humidity: Basking temperatures should be between 95-100°F. Ambient temperatures in the tank should be 80-90°F. Night temperatures should not go below 75°F. We recommend at least two thermometers in the enclosure, one for the basking area and one for the cool area. Digital thermometers are more accurate and reliable than analog or strip thermometers. Humidity should be between 40-50%. The humidity at night may go up to 60% on the cool side of the tank. We recommend to having a hygrometer in the tank as well. Combination thermometer and hygrometers can be found online. Water bowls are an excellent source of humidity for your enclosure.

UVB: UVB light is essential for proper growth in bearded dragon. It allows for the body to metabolize vitamin D and calcium. Even if you fed your bearded dragon straight calcium, the body would be unable to use it without the addition of the UVB light. Natural UVB light comes from the sun. Reptisun and Arcadia offer UVB bulbs for bearded dragons. They should be placed no more than 10-15 inches from the basking area depending on the strength of the bulb. The bulbs should be replaced every 6 months to a year depending on the brand you buy, as the efficacy of the bulbs decreases over time. If you have an enclosure with a screen top, you will need to cut a hole in the screen as the screen blocks the UVB light rays. It has also been found that the coil UVB bulbs are not as effective as light tubes.

Bulbs: We do not recommend using red, purple or blue light bulbs at night. While they are marketed for night use and it is claimed that they don't interfere with the sleep cycle of the bearded dragons, we do not find that to be the case. All lights should be off in your bearded dragon enclosure at night. A ceramic heat emitter can be used for warmth during the night. A halogen bulb can be used in the basking area for proper heat, easily found at Home Depot. There are some reptile marketed combination bulbs that have heat and UVB. Neither is better than the other as long as you offer proper heat and UVB light.

Feeding: A water source should be offered at all times. While you may not see them drinking, the option for them to do so is important. A water dish will also help to keep the humidity at appropriate levels. Some bearded dragons will self soak, so offering a water dish big enough for them to climb partially into is important. Even though bearded dragons are from an arid environment, they would still have access to water in the wild.

Juvenile bearded dragons require 80% insects and 20% greens while they are growing. Greens such as collards, mustard, dandelion, and escarole should be offered daily. Vegetables and fruits can be added in; however, greens should make up the majority of their salad. Insects should be fed 2-3 times daily while the bearded dragon is young and growing. Multiple small insect meals vs. one large insect meal is much better for digestion and to prevent impactions. The insect should not be any larger than the space between the bearded dragon's eyes. Feeding insects that are too large can cause impactions as well. Insects such as crickets and dubia roaches can be fed daily. Mealworms, super worms and horn worms are fattier and should be used as treats. Insects should be gut loaded with vitamin-rich greens like kale, collards and swiss chard. Additionally, commercially made gut loading diets can be fed to your insects. This will allow your bearded dragon to get more of the vitamins and minerals that they need. Insects should be dusted with calcium powder before feeding. If you are feeding insects in your enclosure, make sure all the insects are eaten. It is not unheard of for a cricket to nibble on your bearded dragon if it isn't eaten.

Adult bearded dragons should be 80% greens and 20% insects. A daily salad of greens and veggies should be offered. Insect consumption can go to one meal every couple of days. The size of the insect will have increased and the number you feed will have decreased.

Supplementation: Calcium supplementation, without D3 or phosphorous added, can be used daily either dusted on insects or on greens. Calcium with D3 can be supplemented once a week to once every other week. It is possible to over supplement the calcium with D3 to the point where the kidneys are affected. A multivitamin can be used once every other week as well.

Handling: You should get your bearded dragon used to handling from young age. They are a prey species so they may not like when you come at them from above or grab them around the middle. They like to feel that all four of their legs are supported. With one hand scoop your bearded dragon onto the forearm of your other arm. The bearded dragon can hug your arm with all four limbs. Smaller bearded dragons can be cupped in your hands. Be careful that they don't fall. Once they get used to handling, some may enjoy clinging to your shirt on the front of your chest. You can also get them used to wearing a harness. Reptiles are a vector for Salmonella so make sure you wash your hands after handling them or their feces.

Metabolic Bone Disease (MBD): MBD is a common ailment of the captive bearded dragon. This is most commonly a husbandry related problem. If the bearded dragon does not get enough calcium and vitamin D supplementation and access to UVB lighting, the body will start to leach calcium out of the bones to in order to function. This results in a bearded dragon that has soft, pliable bones that easily fracture or break. They will have malformed jaws, legs, spine, and tails. In worst case scenarios, there is not enough calcium in the body for muscles to function and the bearded dragon is unable to move or they may have tremors. Depending on when the condition is caught, this sometimes can be treated successfully. It can take months for this condition to be treated with a lot of supportive care and the bearded dragon may have life- long malformations.

Adenovirus: Often called the "wasting disease" or "star gazing disease," this is a very contagious disease that can cause serious illness in bearded dragons. Young, old, and stressed animals are the most commonly infected. This is transmitted via fecal-oral route and most commonly affects the stomach, intestine, brain and liver. Symptoms can be non-specific and include things like weight loss, lethargy, abnormal postures and sudden death. Some animals

may not show any symptoms and just be carriers of the disease, spreading it to other animals. A PCR test can help with diagnosing this disease and involves a cloacal swab or wash. Positive animals can shed this virus for life. Treatment consists of supportive care; fluids, antibiotics, assist feeding, and sometimes a feeding tube can be placed. There is no guarantee that treatment will be curative. If bringing a new bearded dragon into your home, you should test for this disease as well as having a quarantine period to prevent transmission of any other disease to your collection. This disease is very hard to kill in the environment so disinfection may be very difficult.

Yellow Fungus: This is the most common fungal disease in captive reptiles. CANV or Yellow Fungus causes a yellowish-brown crusting and coloration on the body. It generally starts with a small crust or scabs but will increase in size and spread to other parts of the body randomly. Any animal can get this disease, but it generally is associated with stress and animals kept in crowded, unsanitary conditions. It is very contagious disease that can be spread to other reptiles in your collection. A skin scrape of the infected area is sent to the lab for testing to confirm infection. Treatment includes debridement of the lesions, antifungals and antibiotic creams and can take a very long time to resolve. However, this disease is often fatal as the infection usually goes deeper than the skin. You should quarantine any new animal before adding to your collection and have proper handling hygiene.

Recommendations: Physical exam every 6 months. Fecal testing once a year. Blood work once a year

Resources:

For live bugs: Josh's Frog, New England Herptoculture, Flukers Farms, Rainbow mealworms, Petco, Petsmart

For Enclosures: The BioDude, New England Herptoculture, Reptile Basics

For Lights: Arcadia, Jungle dawn, Reptisun

Facebook Groups: How Not to Slay your Dragon, DIY Reptile Enclosures, Advancing Herpetological Husbandry, Reptelligence, Reptile Enrichment and Training

~Erica Hayden, CVT