Central Bearded Dragon Care Sheet

General information

The central or inland Bearded Dragon (*Pogona vitticeps*) is wide spread throughout central Australia's arid woodlands and deserts. Due to their placid nature and hardiness, these lizards have found themselves becoming more popular as pets. On average, their life expectancy ranges from 7-12 years over which they can grow to lengths of 30-50 cm with some individuals living longer and attaining lengths of up to 60 cm. In most cases, they reach sexual maturity between 8-12 months.

The Central bearded dragon (CBD), can be identified, by its hallmark beard. They have round pupils, fleshy tongues and acrodont teeth (fused to the jaw bone). Unlike some lizard species they are not capable of tail autonomy (dropping their tail) (Raferty 2004).

There are 8 species of bearded dragons recognized, including, *Pogona barbata*, *Pogona henrylawsoni*, *Pogona microlepidota*, *Pogona minor*, *Pogona nullarbor*, and *Pogona vitticeps*. *Pogona minor* is further subdivided into 3 subspecies: *Pogona m. minor*, *Pogona m. minima*, and *Pogona m. mitchelli* (Wilson and Swan, 2010). The most common of these species kept in captivity is *Pogona vitticeps*, the central bearded dragon.

Husbandry

Enclosure

Adult bearded dragons can be housed indoors in enclosures measuring no less than 1.2-1.8 meters long (4-6 feet) and 0.6-0.9 metres high (2-3 feet) but larger is ideal. Good ventilation is essential to help manage air circulation, temperature and humidity. In some climates, they can be kept in outdoor pit environments with access to natural lighting and temperature fluctuations. It is important to keep bearded dragons housed individually as they can inflict serious damage to each other resulting in loss of limbs and even death. Although many say multiple females can be kept together, it is the authors experience this is situation is not a safe practice and is best to avoid a dangerous situation then have to deal with its aftermath.

Substrate

There is no perfect substrate. They all have their good and bad properties and choosing can be tricky. It is recommended to choose a substrate that can be easily cleaned, controls moisture and satisfies the needs of the species being kept. Newspaper, butchers paper of paper towels are easy to clean, pose no risk for obstruction but do not allow for digging and look unnatural. Washed playground sand is acceptable and although many recommend against it because of fear of impaction, this is usually as a result of underlying diseases or improper husbandry predisposing to this problem and not a
substrate issue in itself. Specially designed reptile carpet is a good option although it can be difficult to clean and can be expensive. Astroturf or artificial grasses can fray with the ends being ingested causing obstructions or can get wrapped around digits causing damage. Vermiculite is often used as a substrate for breeding/incubation purposes but can be used as a general substrate with low risk, good odour control, is easy to spot clean and is relatively cost effective.

It is recommended to avoid calci-sand, gravel, corncob, pea gravel, crushed walnut and wood shavings made of Pine or Cedar.

**Furnishings**

A place for your dragon to hide located on both the warm and cool end are imperative to minimise the risk of stress. These should be easy to remove for cleaning and to allow you to check on your dragon as needed.

In the wild, most CBD’s spend their time in bushes, on trees or basking on rocks. If they get too hot, they will sometimes burrow underground to seek protection. It is important that a captive enclosure offers these facilities. Thick branches, rocks, hollows, basking sites and climbing facilities are essential to minimise stress and provide your dragon the ability to self regulated its temperature. These facilities also provide environmental enrichment. It is not recommended to allow your dragon to roam around the house or to be out of the enclosure unsupervised. Outside of the enclosure they are at risk of over cooling, escaping, trauma, ingestion of foreign or toxic material and also potentially spreading zoonotic diseases such as Salmonella.

**Lighting/Heat**

It is recommended that you supply a day-night cycle for your Central Bearded Dragon of 12 hours of light and 12 hours of darkness but adjusting this cycle to match natural cycles is also possible and may contribute to more natural behaviours. Full spectrum lighting containing ultraviolet B radiation (UVB; 290–320 nm) and infrared heat (basking area 38-45°C; 100–115°F) is recommended. These provisions are needed to ensure proper digestion, metabolic function and development (Stahl 1999). The UVB output will degrade over time and requires routine replacement every 6-12 months depending on manufactures recommendations. Alternatively, the UVB output can be measured using a radiometer. At our clinic, we offer a free service where your bulbs can be tested to ensure adequate UVB is being provided in your dragon’s enclosure. This can also save on bulb costs over the life of your dragon. Remember, UVB not only needs to be available but also needs to be accessible. This means that the light will need to be positioned where your dragon is basking and at a distance where the UV will still reach your lizard. Ensure there is no glass or plastic between the light and the dragon as in most cases, this will block out all UVA and B. Certain screens can block and reflect, up to 80% of usable UV so take this in to account when designing the enclosure. It is also possible to provide too much UV. If this occurs, it has been linked to eye inflammation, skin diseases and possibly, some cancers. UV bulbs made and tested specifically for
reptiles should be the only bulbs used.

UVB is essential to allow your dragon to produce Vitamin D3 in the skin. Vitamin D is needed to absorb calcium from the diet to be used for proper skeletal growth, muscle function, and the immune system. The condition, nutritional secondary hyperparathyroidism, often called metabolic bone disease (MBD), is one of the most common ailments seen in practice and is preventable though proper diet and husbandry practices.

**Don't forget about the sun!**

There is no better source of UVA and UVB than the sun. Allowing your bearded dragon to have access to natural sunlight daily or even weekly will be beneficial. Your dragon should be supervised when taken outside. They can run fast, escape quickly, get snatched up by birds and eat things they shouldn’t. An outdoor basking enclosure can be constructed to ensure safe access to the sun. In all situations, it is important to make sure your dragon has access to a hide for safety and a suitable area to escape the sun to avoid overheating.

**Heating**

Having a large enough enclosure with properly placed branches, rocks, hides and shelters, allows your dragon to thermo regulate, keeping its body temperature in its preferred optimal temperature zone (POTZ). The cooler part of the enclosure should be approximately 25-27°C (80°F). A drop of 5–10°C (10–15°F) during the evening is tolerated well by adult dragons. A radiant heat light source is needed to create a basking area: (35–45°C; 95–105°F). Heat rocks are discouraged as they increase the risk of thermal burns. All heating elements should be covered to protect your dragon from burns and should always be controlled by a reliable thermostat. Place thermometers at both ends of the cage and use an infrared thermometer to spot check different areas to ensure correct heating is achieved.

**Diet**

Analysis of wild, adult bearded dragons, has been found to be made up of arthropods, worms, small rodents, lizards, greens, fruits, and flowers with a break up of ~60% insect dry matter made up of multiple insects (up to 9 types most of which were a specific type of termite (*Drepanotermes* spp)) and 16% plant dry matter (Oonincx DG et al 2015). In captivity the diet should attempt to mimic this distribution through offering of a mixture of leafy vegetables (e.g., dandelion, Swiss chard, escarole, endive, romaine, chicory, mustard, beet tops, bok choy and collard greens), carrots, squash, and zucchini (Stahl, 1999) and insects such as e.g., crickets, silkworms, cockroaches, black soldier fly larvae, mealworms, super- worms). Hatchlings and juveniles (<4 months of age) can be offered 70 % insects (ie crickets, roaches, black soldier fly larvae, silk worms) less than the width of the dragon’s head) and 30% mixed plant matter of leafy green veggies (De Vosjoli and Mailloux, 1996, Oonincx DG et al 2015). As your dragon gets older, it is
recommended to increase the amount of plant material. I recommend aiming for 60-70% plant matter and 30-40% insects. Hatchlings <2 months of age should be fed two to three times per day. Animals from 4 months of age to adulthood can be fed once daily to every two days (De Vosjoli and Mailloux, 1996).

**You are what you eat!**

It not only important to feed your dragon the right proportion of food but to also offer the highest quality food. Often foods sold by breeders and pet stores, have had a limited diet and therefore are of limited nutritional value. The practice of feeding the food source a good quality diet has been term “gut loading”. It has been found that the prey items should be fed to your dragon no later than 48 hours after being fed a high quality diet, as the benefits will no longer be present within them after this period. A mixture of veggies with a vitamin supplement is one way to achieve this. In our hospital, we use a product called Bug Burger made by Repashy® to help balance the insect protein component of the diet. The gut loaded insects, can then be **lightly** dusted 2-3 times per week with a calcium powder that does not contain Vitamin D or phosphorus and should be offered immediately after dusting. This will aid in maintaining the ideal calcium phosphorus balance of approximately 2:1. Alternatively, a liquid calcium supplement can be administered at a prescribed dose.

For those fussy dragons, there are some well formulated diets on the market that appear to meet their needs well. Repashy, Grub Pie and Veggie Burger are good supplemental diets but should make up no more than 50% of the overall diet.

It is recommended to offer food in the mornings so that digestion occurs during the warmest part of the day. A multivitamin powder can be sprinkled on the vegetables or insects every one to two weeks to help with the addition of nutrients they may be missing.

**Brumation**

During the cooler months, wild bearded dragons will often slow their metabolism down in response to the lower temperatures, shorter day length and decreased available food and water. Despite a more controlled environment in captivity, millions of years of instinct can still take over and cause your dragon to enter this slowed state. During this period your dragon may not eat, drink, defecate, or move for several weeks. They may bury themselves completely underground; go to the darkest coolest part of the enclosure becoming very unresponsive. A healthy dragon can safely undergo brumation but young dragons (under 12 months old) or those that are not in top physical condition should not be allowed to enter this state. Having your dragon examined before brumation is recommended.

In those animals deemed suitable, brumation can be achieved by slowly cooling the
adults for 4–6 wk. to 16–21°C (60–75°F) with a reduced light cycle to 10 h during the late autumn or early winter (Strimple and Strimple, 1998; Stahl, 1999). A proper basking area should be provided to allow your dragon to bask if desired, especially if they are being fed. Water should also be provided during this time. Your dragon should be routinely checked and weighed during brumation to identify any concerns before they become larger problems. When waking from brumation, the ambient temperature should be gradually increased to maintenance temperatures over a period of 2–3 weeks.

**Quarantine**

Our current recommendation for bearded dragon quarantine is a minimum of 3 months but a 6-month quarantine period may be safer. Quarantine periods can be shortened if certain screening tests are performed such as a physical exam, internal/external parasite checks and viral testing are performed. See the article on "Quarantine" to understand more about this important practice.

Due to a high prevalence of certain conditions such as parasitism and Agamid adenovirus, screening for these conditions is recommended in all dragons.

**Breeding/Gender identification**

As this is a basic care sheet, breeding is beyond the scope of this article. However some reproductive emergencies are discussed in the links below. Future articles will discuss breeding of reptiles in greater detail.

However, it is important to know the gender of your dragon. Many medical issues are reproductive in nature and being aware of what can go wrong can result in early intervention and treatment which can be life saving. Although external characteristics and behaviours are often used to determine the sex of a dragon, these are not always accurate. If the sex has not 100% known (ie. has laid eggs), the authors recommendation is to always confirm the gender using ultrasound which aids in locating the gonads (ovaries or testies).

**Common Medical conditions**

The highlighted conditions will be discussed in more detail in the general information section of the website.

**Nutritional secondary hyperparathyroidism (Nutritional Metabolic Bone Disease)**

**Dysecydysis**

**Regurgitation**

**Dental disease**
Femoral pore impaction
Heart Disease

Parasites

Gout

Reproductive issues (i.e. Follicular stasis)

Trauma

Aneurysm

Fatty Liver (Hepatic lipidosis)

Adenovirus (atadenovirus)

Cancers

References


