

# Species Care Series

Presented by the Alaska Herpetological Society

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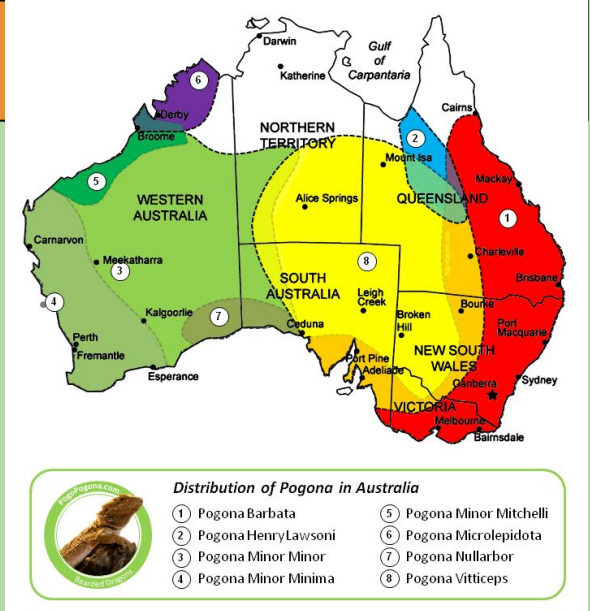
# AHS Species Care Series presents- Bearded Dragons (*Pogona vitticeps*)



Why are they called *Bearded* dragons?

# Habitat and Facts

- Bearded dragons are native to much of Australia with its natural habitat being made up of dry desert regions and open woodlands.
- Considered terrestrial, but these lizards can be skilled climbers and are enthusiastic diggers
- Average lifespan of 10-15 years, although 20-25 years is very possible with good care in captivity
- Average adults reach 18-24” long
- Dragons are *diurnal*, meaning they are most active during the day



# Enclosure Sizes

**Bigger is better for Beardies!**

Bearded dragons enjoy larger open areas with ample climbing opportunities.

Bearded dragons grow very fast. Unlike other reptiles, it is acceptable to start in a large enclosure or their “forever” home. Even for babies, bigger is best for these active lizards.



- 4'L x 2'W x 2'H minimum
- 6'L x 3'W x 3'H preferred
- Bigger is always better!



# Enclosure Types

Glass- Popular and widely available. Typically come with a screen top for good airflow and helps regulate low humidity. However, glass is a poor heat insulator and can be difficult to keep heated.

Wood- Wood enclosures with glass doors are much better than just glass at keeping in heat because wood is an excellent insulator. This can be a good and widely available alternative. However, not all types of wood are safe- ensure the wood is reptile safe before use.

PVC- A lightweight option that is often designed for stacking. PVC enclosures can come with a screen top and sliding glass doors for good airflow and ease of access to your dragon.



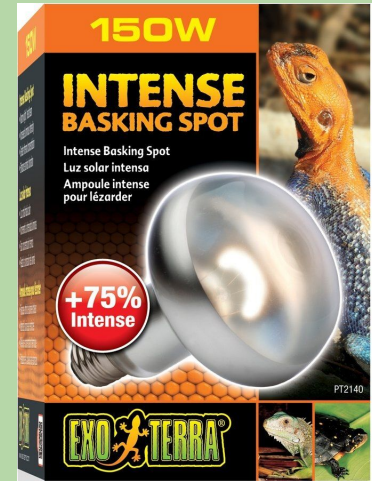
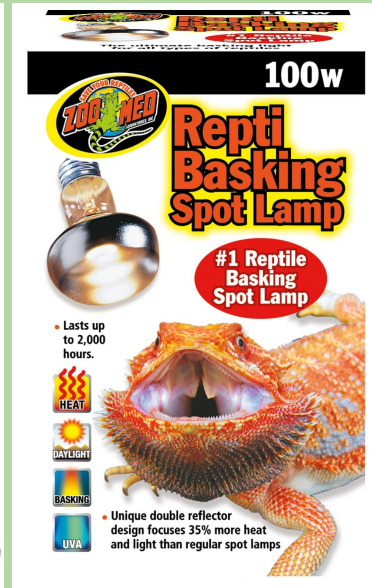
- Screen. In your search for a terrarium you may see some that have walls made from wire screens. These are extremely dangerous for bearded dragons. In addition to the obvious heating issue, screen cages can injure bearded dragons. Of course, screen tops are a different story because the bearded dragon will likely not be able to reach the screen lid. We cannot recommend using a screen-walled terrarium.

# Temperatures and Heating Elements

Bearded dragons should have a cool side temperature of 70-85°F, and warm side temperature of 85-95°F.

A daytime basking surface temperature of 95-115°F

If you are having trouble maintaining the basking temp try using two bulbs



These lizards do best with a temperature drop at night. As long as temperatures are above 55-65°F, then no heat source is needed overnight.

# Lighting and UVB

Lighting and UVB are crucial to your beardies health.

## Recommended UVB

- 12% quality UVB bulb or 14% Arcadia Dragon bulb

## Recommended Brands

- Zoo Med Reptisun
- Reptile Systems
- LEAP Habitats(UK based)

Avoid compact, “combo” uvb, and coil bulbs

These are dangerous and do not provide adequate UVB



Led lights can be added to brighten up the tank and provide more natural lighting.

12 hours on and 12 hours off is recommended for a day/night cycle

# Humidity

Humidity should be kept between 30-40%, up to 60% can be tolerated.



When using a natural substrate, bone dry substrate will not hold burrows. A light mist in the morning and a heavy misting once weekly will mimic the natural dew cycles and rain.



Products like an automatic ventilation fan can help keep humidity from rising to much



To accurately measure humidity, a digital thermometer with a probe should be used. Place the probe on the ground of the cool side of the enclosure.

Don't forget a water Bowl!  
All animals should be provided water and should not affect humidity. Baths are not a substitute for water Bowls!

Humidity levels that are constantly outside of the healthy range can cause health issues. Occasional dips or spikes outside of this range are not concerning.



# Substrate

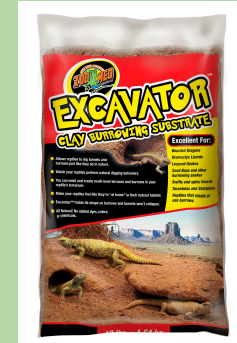
Bearded dragons naturally live on a very sandy substrate.

A pre-bagged products that work well are:

- Jurassic Natural Australian Desert Dragon Habitat
- The Bio Dude Terra Sahara
- Plain Play Sand



A DIY desert mix of 40% play sand, 40% organic topsoil, and 20% ZooMed Med Excavator Clay can also be used. Or 50% play sand and 50% organic topsoil



Solid footing may be preferred.

Recommended options are:

- Slate tiles
- Non adhesive shelf liner

Substrate should be changed every 3 months



A loose substrate is a great way to provide enrichment and pose little danger on their own. Making sure you husbandry is 100% correct to avoid any complications.

# Enclosure Clutter

The more clutter, the better! Beardies are active and inquisitive animals that do best with plenty of enrichment in their enclosure.

Good items to consider are:

- Reptile-safe wood like cottonwood and birch, manopi wood, spider wood, grapevine, ect.
- Large resin decor items for climbing, not in basking
- Thick durable plastic plants or edible live plants
- Quality magnetic ledges for climbing
- Cork bark
- Slate tiles



# Bad/Unsafe Items

Unfortunately a large portion of products sold for bearded dragons are not actually safe for them. Risks to think about are getting toenails or legs caught, materials that trap bacteria, items with small holes that the beardie can get stuck in, and items with sharp edges. Here are some things to avoid:

## Hammocks

- Can snag/rip out claws
- Can cause broken limbs
- Can cause strangulation
- Unnatural spine positions
- Encourages lazy behavior
- Harbor dangerous

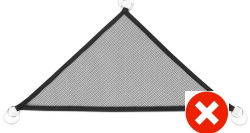
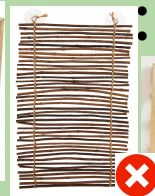


Wood chip substrates and some other substrates can cause impaction and/or harbor dangerous bacteria



## Heat Rocks

- Fire risk
- Mild to lethal burns
- Unnatural for sun



## Ladders

- Severe injury risk to tails and limbs
- Harbors bacteria
- Strangulation risk



## Fabrics

- Harbors dangerous bacteria
- Can snag/rip out claws
- ingestion/blockage risk
- Suffocation risk

## Silk plants

- Choking hazard
- Ingestion risk
- Poisoning risk
- Blockage risk
- Will require surgery/can be lethal if



## Doll furniture/ and kid's toys

- Harbors dangerous bacteria
- Can release toxic VOCs when heated
- Encourages lazy behavior
- Unnatural spine positions
- Choking hazards



# Bioactive Overview

Bioactive enclosures are contained ecosystems that sustain themselves and require minimal maintenance and no full cleanouts. These enclosures can take a lot of time to establish the plants and clean-up crew(CuC) before being able to add your beardie. Most beardies love to munch on plants and snack on any CuC that they manage to catch. You can choose to use fake plants instead of live plants.



Substrate should be a mix of:

- 40% organic topsoil
- 40% play sand
- 20% Zoo Med Excavator Clay
- Small amount of horticultural charcoal
- Top the substrate with leaf litter and a spot in the enclosure with cypress mulch for the CuC to hide



Safe plants:

- Jade
- Aloe
- Opuntia Spineless
- Haworthia
- Nasturtium
- Dandelion
- Basil
- Rosemary
- Spider plant
- Elephant bush
- Day lily
- Mondo grass
- And more!



Clean-up Crew:

- Isopods
- Springtails
- Mealworms
- Dermestid beetles
- Buffalo beetles



# Feeding

**How much salad?** A dragon should be given a portion that is about the same size as their head.

<p><b>Safe-</b> multiple times per week in rotation</p>	<p>Collard greens, mustard greens, arugula, spineless cactus pad, cilantro, lamb's lettuce, watercress, artichoke heart, broadleaf and narrowleaf plantain, dead nettle, sow thistle, creeping thistle, spear thistle, cotton thistle, horse parsley, geranium, and more</p>
<p><b>Moderate</b> - 1-2 times per week</p>	<p>Kale, bok choy, turnip greens, spring mix, lettuces, peeled cucumber, bush okra, radish, dandelion, clover, chickweed, chicory, cornflower, milk thistle, hawkweed, hibiscus, rose petals, sunflower petals, basil, sage, rosemary, cosmos, pansies, dahlia, zinnia, day lily, dill, jasmine, nasturtium</p>
<p><b>Sparingly</b> - 1-3 times per month</p>	<p>Swiss chard, carrot greens, beets, cherry blossom, begonia, agave, chamomile flower, goosegrass, fennel, beet greens, crosswort, asparagus, squash flower, carnation</p>
<p><b>Rare-</b> 1-2 times per month in small amounts</p>	<p>Bell pepper, butternut squash, carrot, zucchini, spaghetti squash</p>

Hatchling 0-3 months

- 60-80% protein
- Insects and salad daily

Juveniles

- 60% protein, 5-6 insects daily
- Daily salad

Adults

- 20% protein, 3-4 insects 2x weekly
- Veggies 3x weekly



**Safe-**

weekly in rotation

Crickets, grasshoppers, dubia roaches, discord roaches, orange head roaches, death's head roaches, wood roaches, green banana roaches, red runner roaches, lobster roaches, silkworms, wax moth, isopods, Black soldier flies, earthworms/nighcrawlers, darkling beetles, hornworm moth, fruit flies, blue bottle flies, snails

**Moderate-**

offer less often

Hornworms, black soldier fly larvae, mealworms, bean beetles, rice flower beetle and larvae

**Rare-**

only on occasion as treats

Wax worms, superworms, butterworms



**No fruit!** They cannot digest fruit properly. Dragons have a single set of teeth fused to the jaw bone. A sugary diet will cause dental disease, cavities, and severe damage to the mouth that can lead to your lizard unable to eat.



# Feeding cont. and Supplements

## Deadly/lethal foods:

- Tomatoes (nervous system damage, gut irritation, dental disease)
- Avocado (liver and kidney failure, congestive heart failure)
- Onions (red blood cell rupture)
- Garlic (red blood cell rupture)
- Potatoes (nervous system damage, gut irritation)
- Fireflies (organ failure)
- Leeks (liver failure)
- Eggplant (organ failure)



More foods that are unsafe, but not immediately life threatening, are fruits, jelly pots, sugary squashes, yams, parsnips, buttercup, peas, berries, hot peppers, broccoli, cauliflower, citrus, sweet potato, spinach, corn, celery, cabbage, pellet diets, wild insects, dried insects, pink mice.

Day	Supplement
Sunday	Calcium
Monday	Cal+D3
Tuesday	Calcium
Wednesday	Calcium
Thursday	Vit+Cal
Friday	Calcium
Saturday	Cal+D3

Calcium should be applied to all insects and greens



- ZooMed ReptiCalcium
- Repashy Supercal NoD
- Arcadia Calcium w/ Magnesium
- Jurassic Calcium w/o D3

Calcium with D3 is an option to be provided occasionally, but is not necessary as dragons may not absorb D3 through their gut



- ZooMed ReptiCal +D3
- Arcadia Revitalise D3
- Sticky Tongue Farms Cal+D3
- Jurassic Natural Cal+D3

Vitamins should be given sparingly as they are potent



- Repashy SuperVite
- Repashy Calcium Plus
- ZooMed Reptivite +D3
- ZooMed Reptivite w/o D3
- Arcadia EarthPro-A
- Sticky Tongue Farms MultiVit

Probiotics can be given each feeding to help maintain a healthy gut



- NutriBAC
- Bene-BAC Plus
- Verm-X

# Shopping List for an Adult Bearded Dragon

	Basic	Advanced
Enclosure	\$400+ for a new glass enclosure	\$275+ for new PVC or wood enclosure
Heat & Light	Bulbs start around \$20+ea, domes \$10-20ea LED light \$20+	RHP \$50-120. UVB Fixture and bulb \$100. Solar Meter \$265+
Temp & Humidity Controls	Digital thermo/hygrometer \$5-20+ea Manual IR Temp Gun \$20-40 Basic Thermostat \$20-50	High-end proportional thermostat starts at \$120+
Substrate & Clutter	2-4 packages of substrate needed for a 4x2x2 enclosure- expect \$20-35 per package Hides, logs, branches, rocks, foliage, ect. Expect \$10+ each item and totalling over \$150	
Misc	Water dish, spray bottle, feeding tongs, \$50+ for all	

# Brumation

Brumation is a deep sleep that many reptiles go through to survive the colder temperatures of the winter. In captivity some bearded dragons brumate as they sense changes in temperature, daylight, and pressure outside despite stable parameters inside their enclosure. For a healthy dragon, brumation is nothing to fear. If your dragon is unwell, try to prevent brumation.

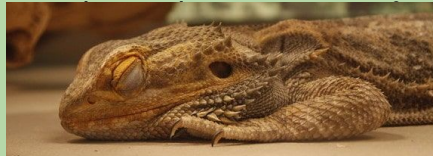
## Signs of brumation in fall/winter:

- Decreased appetite/not eating
- Not losing weight despite not eating
- Not basking
- Hiding/hanging out on the cool side
- Digging a brumation burrow
- Sleepy, slow behavior
- Sleeping for long lengths of time
- Grouchy behavior
- Does not want to be handled



## Helping your dragon brumate successfully:

- Wellness exam and fecal test before brumation begins to make sure illness is not present
- Weigh your dragon before brumation to track weight/weight loss
- Provide at least two hides that give 100% shade
- Stop feeding once dragon becomes disinterested in food
- In late Fall, shorten daylight hours by 30 minutes daily until lights are only on for 6 hours to mimic a short winter day
- If possible, bring temperature in



## Ending brumation in late winter/early spring:

- Increase daylight by 30 minutes every other day until you reach 8 hours in late winter
- Increase daylight by 30 minutes every other day until you reach 12 hours in early spring
- Mist/spray enclosure to simulate spring rains
- Wait for your dragon to emerge on their own! Do not force them to get out of their hide or burrow
- Once dragon is awake and emerged, resume feeding and care as normal
- Offer fresh water right away; many dragons wake up extra thirsty
- Weigh your dragon; if more than 10% of body weight is lost from pre-brumation weight then a vet visit is needed



# Common Illnesses and Symptoms

These are just a few of the many common illnesses found in Bearded Dragon. Proper husbandry and diet can help prevent illness along with yearly vet visits and fecal tests.

## Mouth Rot

- Scabbing, sores around mouth
- Bath breath
- Tail Rot

## Discolored scales

- Mushy, brittle, flaky tail scales
- Rotten smell

## Yellow Fungus

- yellow/brown scales
- Brittle, flaky scales
- Excessive shedding

## Cryptosporidium/Coccidia

### Parasites

- Diarrhea
- Lethargy
- Weight loss

## Metabolic bone Disease

- Weak bones
- Difficulty walking, lifting chest
- Malformed bones

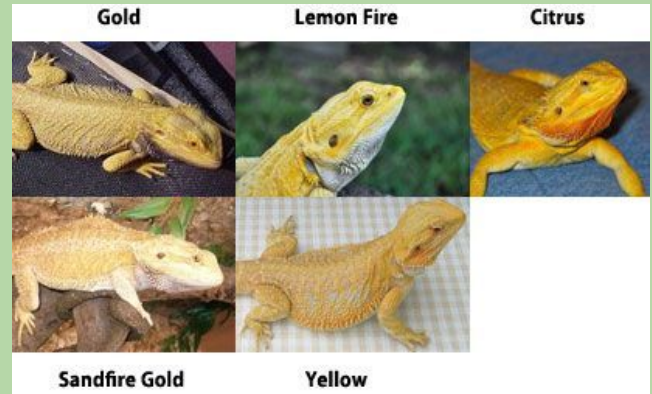
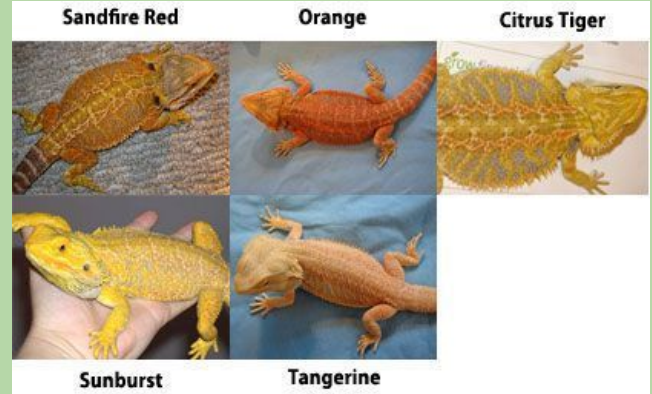
**WHEN IN DOUBT  
SEE A VET!**

# Morphs!

Just like other popular pet species, there are different colors and scale types (called morphs) of Bearded Dragons!



Some of these morphs are prone to additional health concerns and even linked with neurological issues. If you are considering getting one of these 'designer' lizards, please do research on the specific animal you plan to purchase!



# How to Troubleshoot

Some tell-tale signs that something is incorrect-

- Not eating consistently
- Lethargy
- Diarrhea



<Enlarged eyes=  
Vitamin A  
overdose

What steps to take next-

- Check your temperatures with a thermometer or infrared heat gun. Be sure the cool side and warm side are within correct temperature ranges. If there is not a thermostat to control the heat sources already, be sure to get one.
- Use a digital hygrometer to check humidity. Two is ideal to check humidity on the cool side and warm side of the enclosure.
- If symptoms persist, get to the vet!

# Alaska Rescue Stats

Jonathan's Reptiles took in 64 surrenders in 2022.

77% of those 64 surrenders had health concerns.

Of those with health concerns, 53% were surrendered in poor condition, 18% in moderately poor condition, and 29% in extremely poor condition.

30% of the surrenders in extremely poor condition passed within hours or days of being surrendered.

The most significant stat is that 90% of the reptiles surrendered had health concerns directly related to improper husbandry.



Reason for Surrender	#	Health of Surrender	#	Husbandry Related?	
No longer able to care	22	Good	15	Yes	44
Health concerns	15	Fair	9	No	5
Surrendered from AC	10	Poor	26		
Moving/Living situation	7	Extremely Poor	14		
Lost interest	5				
Found	4				
Temperament	1				

Some of the health concerns of surrenders include

- 20 were malnourished or starving.
- 12 had dehydration and/or stuck shed.
- 7 were missing all or part of a limb.
- 6 had mouth rot/stomatitis
- 4 had respiratory infections.

# Emergency Preparedness

Loss of power is a factor for Alaska that you **have** to be prepared, and to be able to evacuate your pet in these situations. You cannot just put a reptile in a bin and take them outside when temps fall below safe levels- under 40°F. They need to be put into something with heat and that will hold heat for them.

An emergency kit consists of a few key items:

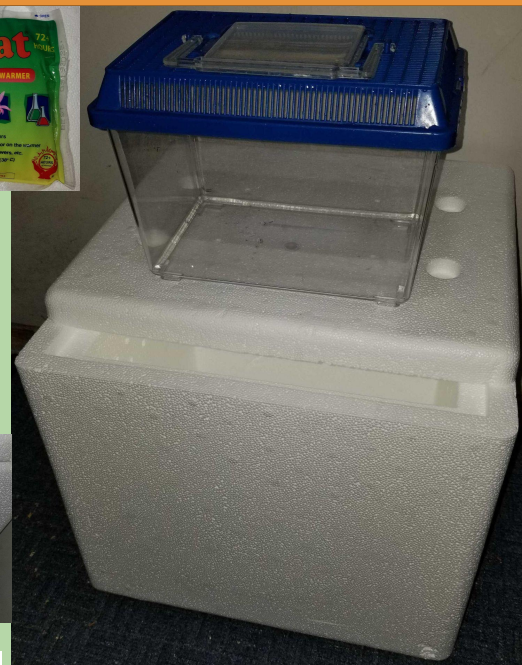
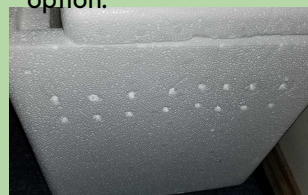
- Insulated container such as a styrofoam box or even a cooler
- A reptile-safe heat pack
- A digital thermometer with a probe to monitor temps without having to open the container
- Any inner container such as a krittter keeper, small tote, or pillow case

Some other items to consider adding to an emergency kit are:

- Critical Care or Carnivore Care depending on your animals
- Syringes
- Povidone-Iodine (like Betadine)
- Gauze, swabs, and cotton balls
- Stainless steel tweezers
- Saline Solution
- Vetericyn Plus
- Canned or Vac-sealed bugs for feeding, do not use freeze-dried



If you are able to heat water, you can use a warm water bottle instead of heat packs and conserve your heat packs for a time when they are the only option.



HotHands brand heat packs and other brands meant for people are NOT reptile safe! These get FAR too hot and will overheat and/or burn your reptile.



# Questions?



We hope you enjoyed this presentation on helping your bearded dragon thrive under your care!

Website:



Facebook page:

