

Ackie Monitor Care Sheet and Bioactive terrarium maintenance guide

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Ackie Monitor (*Varanus acanthurus*)

Difficulty: Intermediate

Ackie monitors are medium-sized terrestrial lizards native to the northwest quadrant of Australia. Their preferred habitat is arid and/or seasonally dry areas with sandy soil and plenty of rocks. These lizards are active during the day, and when they are not out basking or hunting, they spend a substantial amount of time underground in burrows.

Ackies are generally around 24" long, and have a slender, elongated body with a rounded belly. They have a slender, sharply tapered head, a long spiky tail, and a long, forked tongue. Coloring is generally dark red or brown, with a pale ocellated pattern on the back, ringed tail, striped head/neck, and a pale belly.

Ackies are typical monitor lizards in a smaller package, making them a great option for people who like monitor personalities, but don't quite have the space for the whole enchilada. With good care, they are known to live for at least 15 years.

What You Need for a Bioactive Ackie Monitor Enclosure

- 5'L x 2.5'W x 4'H enclosure (with 12-24" substrate dam)
- [Exo Terra Reptile Glow Light, small](#), x2
- [100w Arcadia Halogen Heat Lamp](#), x2
- Plug-in lamp dimmers, x2
- Retes Stack
 - Several large pieces of flagstone or slate tile
 - 2"W x 2"H wood spacers
 - Wood stilts
- [Bio Dude Digital Thermometer / Hygrometer](#), x2
- Infrared thermometer ("temp gun")
- [34" Arcadia Desert 12% UVB T5 HO bulb](#)
- [36" Bio Dude Solar Grow T5 HO Single Bulb Light Strip](#)
- [Bio Dude Glow & Grow 22" LED](#), x2
- [Zilla 24/7 Digital Timer Power Center](#)
- [4' x 2' x 2' Bio Dude Terra Sahara Bioactive Kit](#) (x4 minimum)
- [Bearded Dragon Clean Up Crew Pack](#), x4
- [Desert plants](#)
- Environmental enrichment items ([caves](#), [hollow logs](#), [sturdy branches](#), etc.)
- [Water bowl](#)
- [Repashy Calcium Plus supplement](#)
- [Zoo Med Stainless Steel 10" Curved Feeding Tongs](#)

Terrarium Size

Ackie monitors may not be particularly large, but they are very active, so they need lots of space to thermoregulate and run around in order to stay healthy and fit. The enclosure that you choose should be no smaller than 5'L x 2.5'W x 4'H enclosure, including a 12-24" tall substrate dam. If you can afford larger, then it's strongly advised to do so. Bigger is always better!

For maximum convenience, get an enclosure that opens from the front rather than from the top. PVC is generally the best material for an ackie enclosure, as it's waterproof, strong, and lightweight. However, well-sealed wood is also an option.

As a general rule, **do not house more than one ackie per enclosure**. Some experienced reptile keepers have successfully kept ackies together, but this requires strict attention to the lizards' behavior and a spare enclosure on hand in case they don't get along.

Lighting

Ackie monitors are diurnal, which means that they are active during the day. This means two things: 1) they are stimulated by bright light in their environment, and 2) they need exposure to strong UVB light in order to stay healthy. Reptiles use UVB light to create the vitamin D that their body needs, as well as to strengthen their immune system, and stimulate production of endorphins. UVB even helps keep the enclosure free of pathogens, which is important for bioactive setups.

An **Arcadia 12% or Zoo Med T5 HO Reptisun 10.0** is likely to work the best for an ackie monitor. The bulb should be roughly half the length of the enclosure, placed on the same side as the heat lamps, and mounted in a reflective T5 HO fixture like the Arcadia ProT5 or the Bio Dude Solar Grow light strip.

The basking platform should be placed 7-9" below the lamp if there's a mesh top, and 12-15" below the lamp if there isn't. This is because the strength of a UVB bulb's output changes with distance. Your UVB bulb must be replaced every 12 months to maintain its output. Resist the temptation to use other, cheaper brands — when it comes to UVB, *brand matters!*

Because this is a bioactive setup, you will also need a plant light to encourage healthy plant growth. We recommend at least two **22" Bio Dude Glow & Grow LED lamps** or **Arcadia JungleDawn LED Bars** for this purpose, depending on the length of your enclosure. This bright light is also good for your ackie's mental health.

Lights should be kept on for 12 hours/day, or cycled seasonally from 13 hours/day during summer and 11 hours/day during winter.

Heating

Like other reptiles, ackie monitors are *poikilothermic*, which means that they need a range of temperatures within their enclosure so they can regulate their own body temperature as needed. Areas of heat speed up their metabolism and promote activities like digestion and healing. Cool areas slow the metabolism and promote activities like rest and energy conservation.

Ackie monitor temperature gradient:

- **Basking surface temperature:** 158-172°F / 70-78°C
- **Warm side air temperature:** 84-100°F / 29-38°C
- **Cool side temperature:** 75-82°F / 24-28°C

To create a basking area for your ackie, you will need a cluster of at least two halogen flood heat bulbs like the **100w Arcadia Halogen Heat Lamps** (optimum wattage may vary) and at

least two small ceramic fixtures like the small **Exo Terra Reptile Glow Light** or the **Zoo Med Combo Deep Dome fixture**. If the basking area gets too warm, you can plug the lamps into a lamp dimmer like the **Lutron Credenza** and reduce the heat that way. If the basking area is too cool, you will need higher-wattage bulbs.

The basking surface should be a **Retes stack**, which allows your ackie to feel secure while also picking the exact temperature it wants to bask at. For instructions on how to make a Retes stack, visit [this page at ReptiFiles](#).

The most accurate way to keep track of your terrarium's temperature gradient is to use a temperature gun like the **Etekcity 774**.

Humidity

Ackie monitors need an environment with both dry and humid areas, with most of the moisture being underground rather than in the air. To be specific, they need an **average of 20-50% humidity above ground, and upwards of 80% underground**.

Keep track of your air humidity levels with a digital hygrometer like the **Bio Dude Digital Thermometer / Hygrometer**, with the probe placed in the middle of the enclosure. To keep track of humidity levels underground, place another probe inside one of the burrows.

To raise the humidity in your ackie's enclosure and moisten the substrate, pour water into the substrate as needed (showerhead watering cans work great for this!). Don't forget to water your plants as appropriate.

Substrate

A very thick layer of bioactive-compatible substrate is essential to creating a bioactive ackie enclosure. Although this provides plenty of soil for the plants, ackie monitors are a burrowing species that need LOTS of substrate to dig around in! So the substrate layer in your ackie's setup must be packed no less than 12" deep, and preferably deeper — especially for females.

Because this is an arid setup, no drainage layer is needed. Instead, you can jump right into the dirt. You will need a soil-like mix that mimics the sandy soil of their Australian homeland and nurtures drought-tolerant plants. If you want to make your own, you will need a mixture of 40% organic topsoil, 40% fine sand, and 20% Zoo Med Excavator Clay. Mix that with leaf litter, sphagnum moss, and 1 doses of **36qt Bio Shot** to inoculate your soil with beneficial microfauna.

Alternatively, you can let The Bio Dude do the work for you with **The Bio Dude's Terra Sahara bioactive substrate kit**.

To make the substrate functional, make sure to add drought-tolerant CUC organisms like powder blue/orange isopods and arid springtails. You can also add other species like mealworms, superworms, and buffalo beetles!

Decorating the Enclosure

Enclosure décor is more than just making your setup look good. It's also an important part of providing *environmental enrichment* to your lizard, which enhances your pet's quality of life by providing opportunities to express natural behaviors. Although ackies do spend a lot of time underground, they also spend a lot of time above ground, climbing and exploring. Use things like sturdy **branches**, **cork flats/hollows**, **caves**, and **plants** to fulfill that need. Don't be afraid to clutter it up!

Live plants in particular are critical to helping your mini-ecosystem function properly. Make sure the plants that you choose are drought-tolerant and won't be too bothered if their roots get disturbed. Succulents, cacti, and grasses can be great choices!

Feeding Your Ackie Monitor

Ackie monitors are insectivores, which means that they need to eat mostly insects in order to be healthy. And like humans, ackies' nutritional needs change as they grow. However, unlike humans, they need to eat less as they get older — not more:

- **Hatchlings and juveniles (0-6 months) — daily**
- **Subadults and adults (>6 months) — every other day**
- **Pregnant females — daily**

Hatchlings, juveniles, and pregnant females should be allowed to eat as much as they want at each feeding. Subadults and adults should be offered as much as they are capable of eating in a 5-10 minute period.

The key to success with ackies (and most reptiles, for that matter) is to feed them as large of a variety of foods as possible: crickets, dubia roaches, discoid roaches, red runner roaches, black soldier fly larvae, mealworms, superworms, darkling beetles, hornworms, silkworms, grasshoppers, centipedes, scorpions, isopods

Feeder insects should be no larger than your ackie's head. ALL FEEDER INSECTS SHOULD BE LIGHTLY DUSTED WITH CALCIUM SUPPLEMENT BEFORE FEEDING. Vertebrate prey, such as small feeder anoles/geckos, can also be occasionally offered.

Calcium & Vitamins

To ensure that your pet is getting all the vitamins and minerals they need, you need a calcium powder and a multivitamin powder. Take care not to use these too often; too much vitamins can be just as deadly as too little. **Repashy Calcium Plus** is a good way to provide a safe dose of each at the same time.

Water

Although they are “desert” lizards, ackies still need a water dish so they can drink water as needed. Choose a bowl that is shallow enough to prevent drowning. The water should be changed whenever it gets soiled. Scrub the bowl with an animal-safe disinfectant at least once a week.

Handling Tips

When you first bring home your new pet ackie, resist the temptation to immediately start playing with it. You're huge compared to an ackie monitor, and s/he needs time to figure out that you're not going to eat them. Let your new pet settle in for at least 2 weeks before you start handling.

Once your ackie has established confidence in his/her new home, you can introduce yourself. Let them watch you outside of the enclosure. Rest your hand in the enclosure and allow the lizard to familiarize itself with your hand.

Ackies are pretty skittish for the first year or so of life. But eventually they'll stop running away from your hand and get used to your presence. This is when you can start to handle them. But just because you have reached this step does not mean your pet trusts you. Trust and friendship (as far as it goes for lizards) takes time and daily handling.

Handling Techniques

- Support the whole body.
- Use slow movements.
- Never grab from above, chase them, or pull them out of a hiding place.
- Let the ackie voluntarily climb onto you whenever possible.
- Reward them with a bug.
- If they are shedding, leave them alone and don't pull on loose skin.

Tong-feeding is a great way to bond with your ackie!

Care information courtesy of ReptiFiles. For the full guide, click [here](#).