

# Paroedura masobe



BY NEIL MEISTER

I HAVE KEPT SOME UNUSUAL GECKOS over the past 25 plus years, but none as enigmatic as *Paroedura masobe*. With large alien-looking eyes, vivid white-on-black markings and spiked tail, it is a striking creature of unusual beauty. Known mostly to herpetologists and gecko geeks, this species doesn't even have a common name that has really stuck. I have come across a few references to 'Madagascar big-eyed gecko' or 'spinytailed gecko', but in herpetoculture it is most commonly called just 'masobe'.

The genus *Paroedura*, commonly referred to as Madagascar ground geckos, is endemic to Madagascar and the Comoros Islands. Ground geckos include some more common species such as *P. picta*, an easy

to care for and breed species, the regularly imported *P. bastardi*. There are also some real jewels in the genus such as the tiny *P. androyensis* and the delicate *P. gracilis*. *P. masobe* (Nussbaum & Raxworthy in 1994) was the first new *Paroedura* species described since 1936. Since then, 9 new species of ground gecko have been added to bring the current total to 18 species. Being a shy and highly secretive gecko with limited distribution, it's easy to understand how this, the largest species in the genus managed to escape detection for so long. Known only from a few sites, *P. masobe* is believed to inhabit less than 100 km<sup>2</sup> of Madagascar. It is found only in humid, lowland primary forest at elevations between 300 m and 600 m.



Adult *P. masobe*



Terrarium set up for a breeding pair of *P. masobe*

PHOTOS: NEIL MEISTER

My first introduction to this species was through photos of emaciated imports posted online in the early 2000s. The species had a reputation for being delicate and difficult to keep. Although *P. masobe* seemed to fit well in my collection of Malagasy geckos, I avoided purchasing any due to what I'd heard from other hobbyists. A few years later I had the opportunity to purchase a pair of imported geckos that appeared to be in good condition. They did well at the outset, but were extremely shy. I did not see them eat for months, although they were typically active any time I went in the gecko room at night. The geckos would typically freeze when I caught them in the indirect beam of a headlamp, and stealthily move into hiding when I wasn't looking. I kept this pair for some time, but had absolutely no luck with breeding. While it is certainly not a beginner species, some of the difficulties were likely due to a lack of knowledge regarding habitat and diet. Efforts to keep and breed *P. masobe* have since had some success, however its future in herpetoculture and in the wild is uncertain. It remains to be seen if its recent listing under CITES Appendix II will help or hurt it in either situation.

I did not keep the species again until after I attended a presentation on it by Matjaz Rojc at the 2009 Gekkoni Day Expo held in San Diego. I was inspired to try breeding masobe again as I saw many parallels between their husbandry and how I was keeping and breeding the larger *Uroplatus* species. Future

endeavours with both captive-bred and imported geckos have proven successful, but still not nearly as predictable or routine as for most other geckos.

## HOUSING

I generally keep *Paroedura* in a humid forest habitat with sturdy live plants and branches and cork bark tubes for climbing. Vivaria should be at least 45 cm (18") tall for adults. I use 45 x 45 x 45 cm (18" x 18" x 18") or 45 x 45 x 60 cm (18" x 18" x 24") Exo Terra® terrariums. Hatchlings and juveniles can be kept in medium to large 'critter keeper' type vivaria for the first several months. Live plants are recommended, however I have used artificial plants with juveniles in setups where the lighting was insufficient for live plants. Think along the lines of a setup similar to those used for *Uroplatus henkeli* or *U. fimbriatus* with the addition of good hide spots.

Dark hide spots should be provided. I typically use black plastic ones and cover the entrance with a slanted piece of cork bark to keep out light during the day. I provide at least two; one is always humid and the other can be a bit drier. Black, plastic take-out food containers make a cheap hidebox. Simply cut out an entrance and invert to make a mini 'cave'.

## SUBSTRATE

Peat moss or coconut coir mixed with sand or similar forest-type soil mixes are the most suitable.



Subadult *P. masobe*



Incubation usually lasts at least 4.5 months

I sometimes add a bit of clay in the form of plain, unscented cat litter as it helps to absorb excess water. If you're experienced with bioactive vivaria, this is a good species to use that knowledge with.

### LIGHTING/HEATING

Fluorescent lighting is helpful for plants and to provide a natural light cycle, but UVB or heat lamps are not required and heat lamps are not recommended at all. Temperatures should be moderate to cool. Night temperatures can range from 18–22°C (65–72°F) and a drop in temperature below this during winter are well tolerated, although I can't say for sure if they're necessary to stimulate breeding. Daytime temperatures of 23–26°C (74–78°F) work well.

### HUMIDITY/WATER

Misting well every evening will create high humidity through the night and provide drinking water. Regular misting is extremely important, but the enclosure should not be entirely saturated. A water dish is optional.

### CLEANING

Clean feces regularly. Urates can easily build up in areas where the geckos relieve themselves and will become hard to remove if left to harden. A vinegar and water solution can help with cleaning. How often you change substrate will depend on how bio-

active your vivarium is. A 'living' vivarium with soil, plants and isopods will mainly need regular removal of feces buildup and partial substrate changes.

### FEEDING

Crickets are a good staple. Roaches will be accepted if they are about the size of large crickets. Really large or small prey is often ignored. Females benefit greatly from having land snails and isopods (woodlice) in their diet to provide extra calcium. Hatchlings and juveniles should be fed 4–5 insects every second day. Adults should be fed 4–6 insects 3 times per week. Breeding females should be offered land snails at least twice per month. Snails smaller than the size of the gecko's eye are suitable. Isopods can also be offered 2–3 times per month.

Determining the best practices for supplementing these completely nocturnal geckos is key to long-term success. I believe that excessive  $D_3$  supplementation is harmful. I lightly dust insects with Repashy Calcium Plus and use a low  $D_3$  calcium supplement once every week or so. Snails and isopods are not dusted as they are naturally very high in calcium.

### HANDLING

As they are easily stressed by handling and exposure to light, *P. masobe* should only be handled when necessary to move them between cages for breeding or to deal with health issues.



A setup for hatchlings including hides and branches for climbing



PHOTOS: NEIL WEISTER

Clutchmates may be housed together for a few months

## BREEDING

Most *P. masobe* I have worked with since adding snails to the diet have produced at least a few clutches, but the number of good eggs produced each year is quite variable. *P. masobe* imported between September and January may be already gravid, it's usually quite easy to see the developing eggs through their abdomen.

Mating is usually not too difficult to encourage. Often it takes place almost immediately if the male and female are introduced at night. Males and females can be kept in pairs or you can house separately and introduce the male to the female's enclosure periodically for breeding. Typically clutches of two eggs are produced at about six week intervals. Sometimes only one egg will be laid. It's also not unusual to get infertile eggs. These will typically be poorly calcified and will go bad quickly.

One unusual behaviour seen in this species is that they often cover their eggs in feces. This may be a way to hide the scent of freshly-laid eggs from predators. In the wild the fecal matter would likely biodegrade long before the eggs hatch, however it's more liable to dry-on during captive incubation. I gently clean the eggs with a paper towel before incubating. Like other hard-shelled gecko eggs, *P. masobe* eggs need high humidity, but should not be incubated directly on a damp substrate. Placing eggs on a jar lid or similar receptacle filled with dry perlite or vermiculite which is then placed on top of a

saturated substrate in an incubation chamber (i.e. a plastic deli container) is a proven method.

Incubation is not difficult, but it can be long, typically between 4 and 6 months. Temperature affects the length of incubation, with eggs incubating over the cooler months taking longer. I've had some eggs take up to seven months. In these cases hatchlings were typically smaller and weaker than average. Hatchlings can be kept in small vivaria set up similar to the larger adult enclosures. Temperatures near the middle of the temperature range suitable for keeping masobe will work for incubation. Generally night temperatures of 19–21°C (67–70°F) and daytime temperatures of 24–25°C (75–77°F) are good.

## POTENTIAL HEALTH PROBLEMS

High temperatures and/or low humidity will stress these delicate animals, and if prolonged will result in death. Providing humid hides and regular misting will prevent shedding issues. If small amounts of shed are retained, correct the humidity and check to see if it comes off with the next shed. Old, loose skin can be removed with corneal tweezers, however it is best to avoid such problems.

A diet consisting solely of crickets may cause nutritional deficiencies. Both wild-caught and captive-bred *P. masobe* should be treated with care. There is often little warning—if one of these geckos is doing poorly, they can decline and pass away very quickly. That being said, acclimated animals can live and breed for several years.