KEEPING AND BREEDING OF NEPHRURUS AMYAE

By: Frank Payne

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Introduction

Nephrurus amyae, or the rough knob-tailed gecko, is the heaviest if not the longest species of Australia's many geckos. Their range is quite limited, only making up a small part of Australia's central desert. *Amyae* have one of the shortest tails amongst all geckos and lizards at only about 1-1.5 cm long. The tail ends with a small sphere or "knob" that the geckos will wiggle when hunting or communicating with conspecifics. In spite of their tiny tail they are a large gecko at 10-13 cm (4.5-5.5 in) long and over 50 grams for females. Adult males are noticeably smaller than females at around 80% of their size and weight. The head and eyes are very large in proportion to the body and give the geckos a bulldog-like appearance. The scalation is very rough and distinctive giving them a spiky appearance and sandpaper like texture. Coloration is well suited for blending into their desert environment and can range from cream to pink to red.

The author has been enamored with this species from a young age due to their unique and bizarre appearance. Having kept them for approximately ten years now, that interest has not waned. While amyae do not appreciate handling they are a hardy gecko that does well in communal groups. They are a strictly nocturnal species and are rarely visible during the day. However, they are very active at night and make excellent terrarium subjects for the keeper that enjoys going on "flashlight safari".

Keeping

While most *Nephrurus* keepers house their *amyae* in small lightless bins inside of rack systems the author keeps his *amyae* in larger desert terraria for more enjoyable observation. This is a strictly desert species and sand is the primary substrate used. They are not graceful climbers but they will clamber over relatively short structures when exploring. The author uses one or two cork bark or fake rock hides in the enclosure per gecko. A plastic bin filled with damp sand is also used as a humid retreat for shedding and egg laying. The geckos often prefer the humid hide for defecation as well.

Amyae are slow moving but nocturnally active terrestrial geckos and should be provided with as much floor area as possible. The author uses 61 cm by 61 cm (24 in x 24 in) terraria to house one male and two females. Height is not as important. Larger enclosures would be even better. If keeping just one gecko then a 45 cm x 61 cm (18 in x 24 in) terrarium is suitable.

The author has never observed any intraspecific aggression in this species. One male and two females peacefully live together year round. It is not recommended to keep two males together.

While this is a hot desert species they spend their days sheltered from much of heat in rocky dens. A basking spot of around 90 F is provided for most of the year using either a small halogen bulb or an undertank heater. The ambient temperature of the enclosure can range from 24-30 C (75-85 F) for much of the year. Ultraviolet light is provided using a T5HO fluorescent fixture with a Zoo Med Reptisun 5.0 bulb. Daylight is simulated via a high output LED full spectrum fixture in the 6500 K range. During the Summer months the lights are on for fourteen hours, during the Spring and Autumn twelve hours, and during Winter eight hours. While this species is nocturnal and rarely utilizes the lighting provided they still do so occasionally. The author is a proponent of utilizing as natural lighting as is possible for all reptiles to promote healthy circadian rhythms.

The enclosure is misted in the evening once or twice a week. The geckos will occasionally lick the water droplets from their mouths or enclosure walls. A water bowl does not seem to be recognized and the author does not provide one.

Amyae are voracious insectivores. Adults are fed live insects three days a week (Monday, Wednesday, and Friday). The author uses as much variety as possible and feeder insects include crickets, mealworms, superworms, roaches, and silkworms. Large roaches seem to be their preferred prey. It is important to not add too many insects to the enclosure at one time as this can be stressful to the geckos. 4-6 adult crickets or 1-2 adult roaches are a typical meal for each gecko. Every feeder insect is lightly dusted in Repashy Calcium Plus LoD supplement. Like with all insectivores, the insect prey should be properly gut loaded with fresh greens, fruits, and vegetables.

Breeding

For consistent breeding success a strong seasonal temperature variation should be provided. In November the author gradually decreases the temperature of the enclosures for several weeks. After several weeks of gradual cooling the author will stop feeding the geckos while leaving the heat bulb on for one more week. This will allow the geckos to fully digest their last meal of the year and clear their digestive system. Then, the heat bulb is turned off and the geckos are left in their enclosure at ambient temperatures for another week. Next, the geckos are removed to a hibernaculum for winter brumation/hibernation. The author utilizes an unheated garage that maintains a 10 C (50 F) during the Winter months. A wine cooler or other refrigerator can also be used. The lizards are kept in small well ventilated bins with sand and hides. Half of the bin is kept slightly damp to prevent dehydration. The geckos are left to sleep through the winter for the next six weeks. In the Spring, the geckos are returned to their normal terraria. Temperatures are gradually increased over the next week and normal feeding

and care resumes. Usually the geckos will start to exhibit breeding behavior several weeks after emerging from their winter sleep. The author has achieved the most consistent breeding success by keeping the geckos together year round and allowing them to mate when they see fit.

Gravid females become obvious as their abdomens swell considerably. The eggs can be observed through their thin belly skin. It is crucial that females be provided with an appropriate laying site during this time. This is achieved by the aforementioned plastic bin with 7-8 cm (3”) of damp sand. A clear bin is used so that the eggs can be more easily observed from below after the female has laid. Like most geckos, *amyae* almost always lay two eggs at a time but one egg is also possible. The eggs are very large compared to the size of the female. Four to six clutches can be laid in a season per female. More is possible but is not typical. The eggs are removed for incubation to a small container with a perlite substrate. The perlite is mixed with RO (reverse osmosis) water in a 1:1 ratio by weight. Typically 30 grams of perlite and 30 grams of water are used. The eggs are incubated at a constant 27 C (81 F). Hatching usually occurs in approximately 90 days. The eggs will expand significantly during incubation and babies hatch out quite large relative to adult size.

Neonates are raised individually to ensure optimum feeding and growth under similar conditions as the adults. The only difference is young are fed five days a week. Growth is relatively slow in the beginning and adult size is typically not achieved for 18 months.

Conclusion

While *Nephrurus amyae* have long been relegated to bins in racks they do make very enjoyable terrarium subjects due to their bold and active nocturnal nature. They are hardy animals and can be easily kept by most enthusiasts with some reptile keeping experience. Consistent breeding does require a strong cooling period but if that is provided then breeding is also easily achieved. The author hopes that other herpetoculturists will start to keep this species in more naturalistic terraria as they are a bizarre and interesting species to observe.

Images

Adults

Juveniles

Terraria for juveniles

Terrarium for adults