

Keeping of Henkel's leaf-tailed gecko (*Uroplatus henkeli* (Böhme, 1990)) at BION Terrarium Center

Anastasiia Marushchak¹, Oleksii Marushchak², Anastasiia Tkach³

¹ – Head, Laboratory of Arboreal Geckos, BION Terrarium Center, Kyiv, Ukraine

² – Head, Research and Development Department, BION Terrarium Center, Kyiv, Ukraine

³ – Keeper, Laboratory of Arboreal Geckos, BION Terrarium Center, Kyiv, Ukraine

Henkel's leaf-tailed gecko (*Uroplatus henkeli* (Böhme, 1990)) is one of the biggest species of the genus. Its SVL is 120–190 mm (4.72-7.48 in), TL is 70–100 mm (2.75-3.94 in) (total length 260–290 mm (10.23-11.41 in). Juveniles have total length of about 85–90 mm (3.35-3.54 in). The overall build of these animals is rather flattened. Head is comparatively large and flattened and terminates in a long, pointed snout. Average number of supralabial scales is 28– 40 (Angel, 1942). Females are larger than males. Males are easy to sex thanks to their hemipenial bulges (Fig. 1) (Svatek, van Duin, 2001; Gehring, 2020).



Figure 1. *Uroplatus henkeli* male and female. Main distinguishing features are shown.

They have adapted very well to their natural surroundings and the secret lifestyle. A dermal fringe runs the length of their bodies alongside of their lower jaws giving them what appears to be a “beard”. This “beard” masks the edge of the gecko’s body making it completely invisible while sitting silently on a tree trunk or a branch. They are highly variable in patterning and coloration. Even individuals from different locations can have a very different color and/or pattern. It is suggested that *Ur. henkeli* is a complex including various species (<http://uroplatus.info/archives/54>). However this suggestion is still discussable and *U. henkeli* is still monolithic species. The background color of the

species is a light brown with a faint pattern of speckling. Animals can be seen with a lot more melanin or be very blotchy with all kinds of brown and yellowish shades to match the bark of the trees they hide on. There are also a lot of individuals with a lot of white or black speckles, especially on their head. Those specimens that demonstrate wide white crossbands along the body are called “piebalds” or “piebs”. A piebald or pied animal is one that has a pattern of unpigmented spots (white) on a pigmented background of hair, feathers or scales (<https://en.wikipedia.org/wiki/Piebald>). Animals of such piebald morph are of high value among hobbyists and tend to be the most desirable individuals of the species in the international reptiles’ market. We call the morph with deep brown or orange speckles, spinal lines or chocolate spots – “color” morph (Fig. 2). These geckos change their coloration depending on the part of the day. At daytime they imitate pieces of bark on tree trunks. But they show extremely contrast patterns at night (Fig. 3). Even their eyes become orange or red in the dark.



Figure 2. *Uroplatus henkeli* morphs. Regular, “piebald” and “color” morphs are shown.

They are nocturnal animals. They are the most active for the first 2-3 hours after sunset. They mate and forage during this time. During the day they attach themselves to a tree or branch often with their head down, relying on their supreme camouflage (<https://www.supremegecko.com/uroplatus-henkeli-care-sheet>).

Like other leaf-tailed geckos this species is endemic to Madagascar. Their natural range is very fragmented. *U. henkeli* stretches from the Montagne d’Ambre to Ankarafantsika and Bemaraha on the mainland. Their typical locality is situated in the Lokobe Forest (D’Cruze N. et al., 2008) (Fig. 4). They prefer lowland rainforest habitats where they will live on tree trunks, branches and vines often no more than 1.5 till 2 meters (4,9 – 6,5 ft) from the ground. Thin trunks have their preference that measure between 3 to 6 cm (1,2 – 3,4 in). Madagascar is a country with deforestation being a major problem for its biodiversity. This makes habitat loss a main problem for surviving of this species. As a consequence it is harder for the wild populations to migrate and mix genes (Böhme, 2014).

In captivity they are calm but can get stressed out easily when handled, so one should try to avoid any unnecessary contact or handling. When threatened they will use their broad flat tail as a distraction, pointing it upwards and wagging it side to side. When this does not help they will raise themselves upwards so they look a lot bigger and open the mouth in a threat display. If you do need to handle this species it is best to let them walk on a branch or hand and move them. Only grab them when it is absolutely needed (https://www.heterrarium.com/en_GB/a-46451102/info-lizards/uroplatus-henkeli-info-care/).



Figure 3. *Uroplatus henkeli* night coloration.

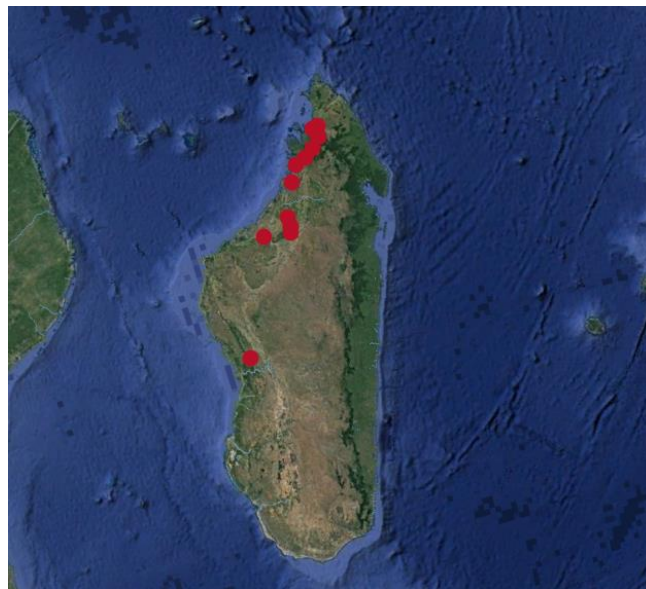


Figure 4. *Uroplatus henkeli* registration points within natural range (Glaw, Vences, 2007).

Due to mass deforestation and loss of their natural habitat as well as poaching they have IUCN Status indicated as “Vulnerable” (<https://www.iucnredlist.org/species/178653/7589062>), The species is also listed in

CITES Ap. II. Therefore development of breeding methods and creation of ex situ populations is extremely important (Dubyna et al., 2019) for conservation of the species.

Keeping and breeding requirements

Keeping. We keep adults in pairs or separately at 75*70*45cm (29,5*27,5*17,7 in) terrariums. Babies are kept at terrariums or plastic lunch boxes of 25*25*25 cm (5,9*5,9*5,9 in). The decoration of the terrarium includes horizontal and vertical thin branches, lianas and living or artificial plants (Fig. 5). Substrate - crushed small pieces of bark with layer of dry oak leaves. Paper towel with a box of wet coconut substrate as moist chamber is also an option. Water dish is obligatory.



Figure 5. *Uroplatus henkeli* male inside a decorated terrarium.

Lighting. Zoo Med 5 UVB lamp is used during breeding season for 10-14 hours per day; during winter dormancy – for 4 - 6 hours per day.

Temperature. Daytime temperature is +24 - +26 °C (75.2 - 78.8 F), at night – +19 – +21 °C (66.2 - 69.8 F). Heating with 40W incandescent lamp is used only during wintering months to maintain daytime temperature. During breeding season we use no heating source. UVB is important for successful breeding.

Humidity. Humidity level is maintained at 75-90% with double spraying (morning and evening) during the day.

Diet. Diet for adults contains Turkestan cockroaches (*Shelfordella tartara*), and crickets (Jamaican field crickets (*Gryllus assimilis*) and Mediterranean field cricket (*Gryllus bimaculatus*). Locusts and soft-shelled snails are used as additional food and treats, which are given 1-2 times per month. We offer 2–3 insects per head 1–2 times per week. If the animal shows signs of obesity, the frequency of feeding is reduced to 1 time per 2 weeks.

It is strictly recommended not to use wild caught insects. Sometimes if an animal is still hungry we can offer one or two additional feeding items. We offer soft-shelled snails for females during ovogenesis. All insects should be gut loaded and dusted with vitamin-mineral supplementation every other feeding. Sepia or cuttlefish “bone” powder works well as a source of calcium. Insects are dusted with it prior to the feeding session. We gutload the insects with fruit, greens and vegetables and sometimes bee pollen as an additional source of vitamins and bioactive elements.

Diet for babies is the same as for adults. We use insects of appropriate size. We offer 3 insects per head 2–3 times a week before age of 1.5 months; 3 insects per head 1–2 times a week after age of 1.5 months. We add mineral supplements "Repashy" with D3 with every second feeding.

References

1. Böhme W, Ibisch PL. 1990. Studien an Uroplatus. I. Der Uroplatus fimbriatus-Komplex. Salamandra 26 (4): 246–259.
2. Sacha Svatek and Susanna van Duin. 2001. Leaf-tailed geckos – the Genus *Uroplatus*. Brahmmer-Verlag, 161 p. Germany.
3. Dubyna Anastasiia, Tkachev Dmitri, Neizhko Ivan, Nekrasova Oksana, Marushchak Oleksii // Development of breeding techniques in herpetoculture as an approach to leaftailed geckos' (Gekkonidae, *Uroplatus*) conservation // Abstract book of 62nd International Conference for students of physics and natural sciences “Open Readings 2019” on March 19-22? Vilnius, Lithuania. – Vilnius. – 2019 – P. 467.
4. D’Cruze, N.; Köhler, J.; Franzen, M and Glaw, F. 2008. A conservation assessment of the amphibians and reptiles of the Forêt d’Ambre Special Reserve, north Madagascar, Madagascar conservation & development, 44-54 pp.
5. Gehring P.-S. Leaf-tailed Geckos – The Complete Uroplatus // Edition Chimaira, Frankfurt am Main, Germany. – 2020. – 383 p.
6. Bauer A. M. 2013. Geckos - The Animal Answer Guide. Johns Hopkins University Press, 159 pp.
7. Böhme, Wolfgang 2014. Herpetology in Bonn. Mertensiella 21. vi + 256 pp.
8. Angel, F. 1942. Les Lézards de Madagascar, Mem. Acad. Malagache: Tananarive XXXVI, 193 pp.
9. <https://www.iucnredlist.org/species/178653/7589062>
10. <http://uroplatus.info/archives/54>

11. https://www.hetterrarium.com/en_GB/a-46451102/info-lizards/uroplatus-henkeli-info-care/
12. <https://www.supremegecko.com/uroplatus-henkeli-care-sheet>