

Keeping of satanic leaf-tailed gecko (*Uroplatus phantasticus* (Boulenger, 1888)) at BION Terrarium Center

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Satanic leaf-tailed gecko (*Uroplatus phantasticus* (Boulenger, 1888)) is one of the smallest leaf-tailed geckos. It has total length of about 100–110 mm (3.94–4.33 in): SVL is 55–70 mm (2.16–2.75 in), TL is about 40 mm (1.57 in). The head is not flattened and terminates in a rounded snout (Bauer, 2013). A prominent row of scales in the interorbital and the occipital regions forms a V pointing on the neck (Bauer, Russell, 1989). Body is laterally compressed allowing these animals to be a perfect example of phytomimesys (phytomimicry) even within the *Uroplatus* genus (Glaw et al., 2007) (Fig 1.).

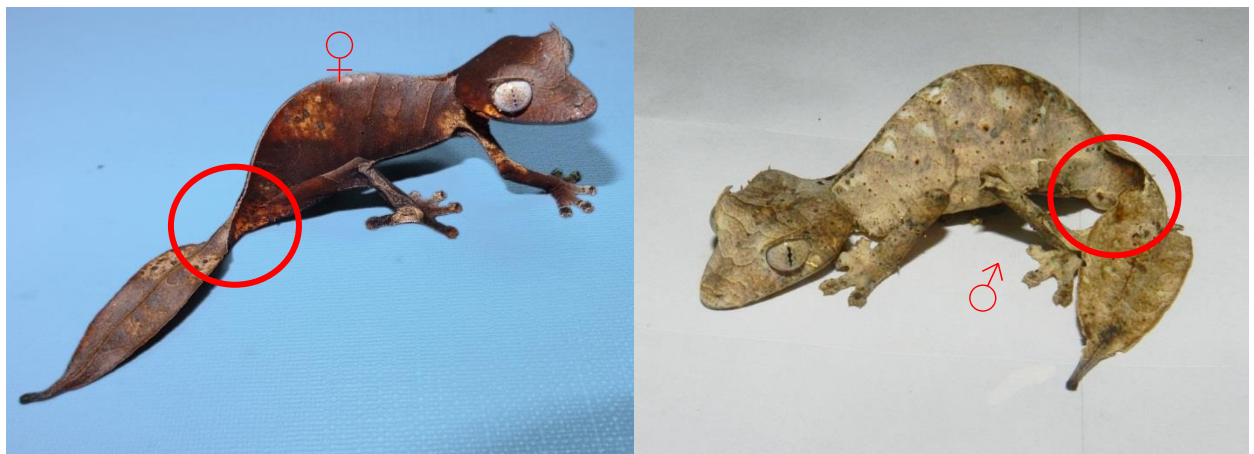


Figure 1. *Uroplatus phantasticus* male and female. Main distinguishing features are shown.

Their coloration is extremely variable: from gray to chocolate brown, beige, orange and red, sometimes with greenish spots or cream to black vertebral lines (Fig. 2). These geckos have no eyelids, except only a transparent coating on their eyes, and therefore they use long, movable tongues to wipe off dust or debris from their eyes. Individuals with heterochromia (different eyes' coloration) are the most valuable for terrarium collections as well as individuals with unusual patterns and spots on the body. Their tails imitate the shape of a leaf (Svatek, van Duin, 2001; Gehring, 2020).



Figure 2. *Uroplatus phantasticus* coloration variability.

Sometimes "giant" *U. phantasticus* can be found in reptile collections worldwide. It is very likely that they belong to a new species discovered in 2019 - *Uroplatus finaritra* Ratsoavina, Raselimanana, Scherz, Rakotoarison, Razafindraibe, Glaw & Vences, 2019 (total length about 14-16 cm). The latter has a pink or red throat (see photo below), while true *U. phantasticus* has a black throat with orange corners of the mouth (Ratsoavina et al., 2019). Still among wild caught animals from Madagascar one can find large *U. phantasticus* individuals, which look as big as *U. finaritra*, but have black throats and pink or orange corners of the mouth. It can be another new species that is not officially discovered and described yet.



Figure 3. *Uroplatus phantasticus* registration points (Glaw, Vences, 2007).

These geckos can be easily sexed since the moment of birth. Males are easy to sex due to the presence of hemipenial bulges and frequently serrated tail fringes that have so-called "spikes" at the base, while fringes of females' tails are smooth and they have no hemipenial bulges. Male often have white "tear-drops" under the eyes. Females are larger than males. Satanic leaf-tailed geckos are capable of living longer than 10 years (<http://www.reptilesmagazine.com/Care-Sheets/Satanic-Leaf-Tailed-Gecko-Care-Sheet/>).

Satanic leaf-tail geckos inhabit tropical forests, generally along the central to northern east coast of Madagascar (Angel, 1942) (Fig. 3). These geckos are rarely found above a few meters off the ground, and prefer to hide in low-lying shrubs, dry foliage and other forms of vegetation (<http://uroplatus.info/uroplatus-phantasticus>).

They also autotomize their tails if being irritated or if they feel sick. The tail does not regrow. *U. phantasticus* missing a tail can be extremely difficult to distinguish from a spear-point leaf-tailed gecko (*Uroplatus ebenau* (Boettger, 1879) (<http://uroplatus.info/uroplatus-phantasticus>). Another sign of bad health is rapid color change and “twisted” tail with its edges up.

Due to mass deforestation and destroying of their natural habitat they have IUCN Status indicated as “Least Concern” (<https://www.iucnredlist.org/ja/species/172906/6939382>). The species is also listed in CITES Ap. II. The survival of the satanic leaf-tailed gecko is intrinsically linked to the continued existence of rainforest habitats on Madagascar. Protected areas are therefore essential, and at present, satanic leaf-tailed gecko is known to occur in at least three: Tsaratanana Strict Nature Reserve, Marojejy National Park or Anjanaharibe Special Reserve. However, poaching of leaf-tailed geckos is known to occur even within protected areas, and efforts to control this threatening activity are required if this extraordinary and unique reptile is to endure (<https://www.cites.org/eng/cop/13/prop/index.php>). Therefore development of breeding methods and creation of ex situ populations is extremely important (Dubyna et al., 2019).

Keeping and breeding requirements

Keeping. We keep *U. phantasticus* separately or in pairs at 45*45*60 cm (17.7*17.7*23.6 in) terrariums, setting an opaque wall (partition) between them in the middle. This wall can be easily installed if it is needed to separate the pair. Babies are kept separately at terrariums or plastic lunch boxes of not less than 30*30*30 cm (11.8*11.8*11.8 in). The decoration of the terrarium includes thin horizontal and vertical branches, lianas, living plants and shards as shelters. Substrate — crushed bark, covered with dry oak leaves or paper. If you use paper on the bottom than provide a moist chamber of at least 1l filled with coconut substrate and dry oak leaves (Fig. 4). Geckos will use it for resting and making clutches. Water dish is obligatory. Interior decoration for babies includes thin branches, paper towel instead of substrate, shallow water dish and if possible – artificial plants.



Figure 4. *Uroplatus phantasticus* substrate-free terrarium (with moist chamber).

Lighting. Zoo Med 5 UVB lamp is used during breeding season for 10-14 hours per day; during resting period (Jan – Feb) for 4 hours per day.

Temperature. Daytime temperature is +24 – +25 °C (75.2 – 77.0 F), at night – +19 – +21 °C (66.2 – 69.8 F); at the time of winter dormancy – +16 – +19 °C (60.8 – 66.2 °F). 25W incandescent lamp is used as both lighting and heating source.

Diet. Diet for adults includes Turkestan cockroaches (*Shelfordella tartara*), black soldier flies (*Hermetia illucens*) and crickets (Jamaican field cricket (*Gryllus assimilis*) and Mediterranean field cricket (*Gryllus bimaculatus*). 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 sign 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 more often. 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.

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