

Keeping of giant leaf-tail gecko (*Uroplatus giganteus* Glaw, Kosuch, Henkel, Sound & Böhme, 2006) at BION Terrarium Center

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Giant leaf-tailed gecko (*Uroplatus giganteus* Glaw, Kosuch, Henkel, Sound & Böhme, 2006) is a member of a so-called “*U. fimbriatus* group” of leaf-tailed geckos, that includes also *Uroplatus fimbriatus* (Linnaeus, 1758), *Uroplatus henkeli* Böhme & Ibish, 1990, *Uroplatus sameiti* Bohme & Ibish, 1990 and *Uroplatus sikorae* Boettger, 1913 (<http://uroplatus.info/archives/70>). *U. giganteus* is the biggest species of the genus (Fig. 1).



Figure 1. Sexual dimorphism and general appearance of *Uroplatus giganteus*.

Its SVL is 210–230 mm (8.27–9.06 in), TL is up to 110–120 mm (4.33–4.72 in) (total length 310–325 mm (12.21–12.79 in). Total length of young geckos is 90–110 mm (3.54–4.33 in). *U. giganteus* at first glance resembles typical *U. fimbriatus*, but the color of iris is plain cream to white at daytime and develops a fine red stripe pattern after nightfall (<http://uroplatus.info/archives/70>) while *U. fimbriatus* demonstrates yellow color of the iris. Also morphology of hemipenises is a feature that helped scientists to find out that *U. giganteus* and *U. fimbriatus* are two different species (Glaw et al., 2006; Gehring et al., 2018). General build is rather flattened, with long skull and 28–40 supralabial scales. The dorsal basic color is white to beige; large brown to black bands and patches are scattered from the head to the tip of the tail. A broad dermal flap runs along the body with enlarged serrated extensions distributed at regular intervals. Adult males

have well-seen hemipenal bulges (Svatek, van Duin, 2001; Glaw, Vences, 2007; Gehring, 2020). It is sometimes considered that giant leaf-tailed geckos can be sexed immediately after hatching. Male will have brownish hues with a clear diamond pattern on the back, turning into noticeable dermal spines in its angles. In contrast, female will have greenish shades and less noticeable spines (Fig. 2). However, it should be noted that this approach is still discussable. The most reliable age of sexing is about 1 year when males start showing hemipenal bulges. The elder your animal is the bigger is the chance of correct sexing.

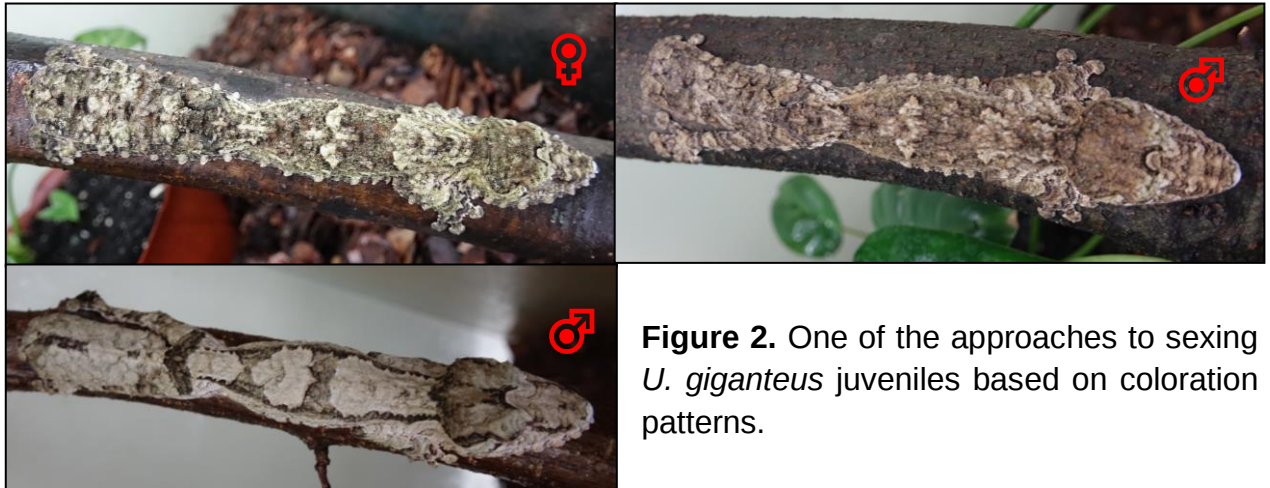


Figure 2. One of the approaches to sexing *U. giganteus* juveniles based on coloration patterns.

This species is endemic to Madagascar as well as other species from *Uroplatus* genus. They inhabit tropical rainforests of the eastern, northeastern, central and southeastern parts of Madagascar and the surrounding islands. They can be usually found on the lower parts of the trees to a height of 2 m, mainly on branches, trunks and vines (Bauer, 2013; Bohme, 2014). This species is endangered due to mass deforestation and decreasing of suitable habitats as a result of producing of tree coal by local people. Therefore development of breeding methods and creation of ex situ populations is extremely important (Dubyna et al., 2019).



Figure 3. *Uroplatus giganteus* defensive pose and registration points within the natural range (Glaw, Vences, 2007).

U. giganteus tend to be quite aggressive. They usually try to bite a keeper while handling or sometimes during routine servicing of the enclosure. Protective behavior includes eyes' bulging, opening of the mouth, and tongue showing. Also, they rise on their paws, raising and wagging the tail. The last warning is sharp aggressive attacks to the side of the stimulus. It is recommended to avoid such bites, as geckos can damage their jaws and consequently suffer from stomatitis later.

Keeping and breeding requirements

Keeping. We keep these big lizards separately or in pairs (1.1) in 90*65*120 cm (35.43*25.59*47.24 in) vertical terrariums. During the first 1.5–2 months of life we keep babies in 30*30*30 cm (11.81*11.81*11.81 in) terrariums or plastic containers, that have good ventilation, with further moving to bigger boxes. The decoration of the terrarium consists of large vertical and horizontal branches for adult individuals and medium vertical and horizontal branches for juveniles, as well as lianas, living or artificial plants. We use big pieces of oak bark covering the bottom of the enclosure as a substrate for adults. We keep juveniles for the first 6 months with a paper towel instead of bark substrate. Decoration includes thinner branches and smaller pieces of bark (Fig. 4). Water dish is obligatory.

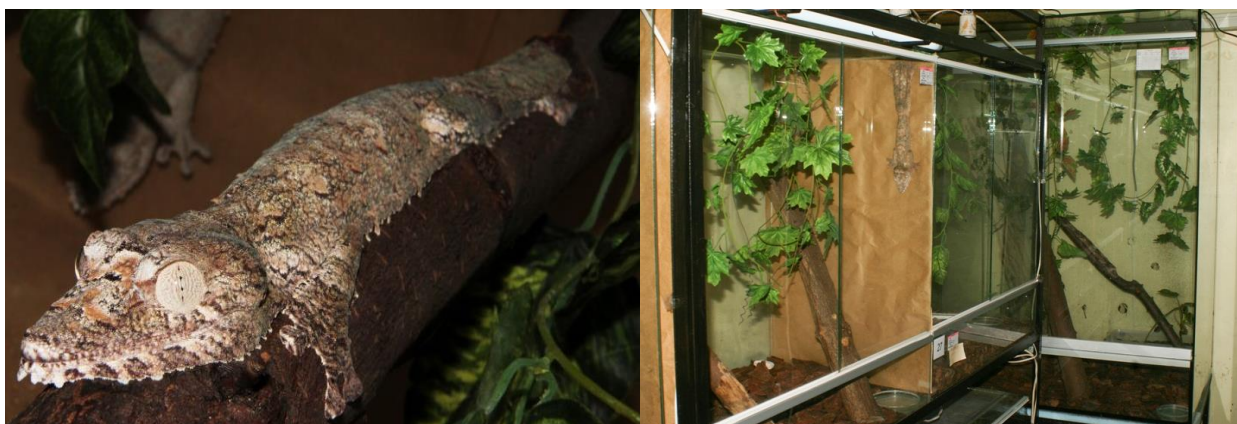


Figure 4. Interior decoration of the terrarium for *Ur. giganteus*.

Lighting. We use Zoo Med 5 UVB or full spectrum lamps for lighting: at mating season for 12-14 hours a day; during other part of the year and prior to wintering it is 9-10 hours a day.

Temperature. We keep *U. giganteus* with daytime temperature of +24 – +26 °C (75.2 – 78.8 F), and nighttime temperature – +19 – +21 °C (66.2 – 69.8 F). We do not provide a basking spot.

Humidity. For both juveniles and adults we maintain air humidity of 75–90% with double spraying during the day.

Diet. For adult animals the diet consists of big locusts, Turkestan and marble cockroaches and crickets of adequate size. We offer 1–2 insects per animal 1–2 times per week and reduce the feeding sessions' frequency to 1 time per 2 weeks in case any signs of obesity are seen. Sometimes if an animal is still hungry we can offer one or two additional feeding items. For females during ovogenesis we offer soft-shelled snails. Diet of juveniles is the same as for adults. Frequency of feeding: 2-3 insects per 1 young gecko 3 times a week. 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.

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