herpy

FROGS

Common Reed Frog

Hyperolius viridiflavus

A small, fast reed frog from eastern and central Africa that calls like a xylophone at dusk, from savanna waterholes to gardens and fields. *Hyperolius viridiflavus* changes colour with age and sex, is nocturnal and feeds on small insects. It needs a tall, bright terrarium with many plants and breeds in water when the rains set in.

Family: Hyperoliidae

KEY FACTS

THE ANIMAL

Adult size	**2-3 cm** snout-vent length
Lifespan	**1-2 years**
Active	**At night**
Lifestyle	**Arboreal**
Habitat	**Savanna and wetland**
Skin toxins	**None known**
Difficulty	**Intermediate**

CARE

Min. enclosure	**60 × 30 × 45 cm** L × W × H for 4 adults
Temperature, day	**22-27 °C**
Basking spot	**29-32 °C**
Temperature, night	**18-21 °C**
Humidity	**60-80%**
Water	**Water dish** depth 3-5 cm
UVB	**Optional** Ferguson zone 1
Diet	**Insects and small invertebrates (springtails, fruit flies)**
Kept	**In groups**

BREEDING

Reproduction	**Egg-laying**
Development	**Tadpoles in water**
Egg-laying site	**In water**
Sexually mature	**4-12 months**
Eggs per clutch	**94-800**
Hatching	**2-5 days**
Larval period	**56-120 days** from hatching to metamorphosis
Larval diet	**Algae/plants and complete diet**
Parental care	**None**

PROTECTION AND PAPERWORK

CITES	**Not listed**
IUCN	**Least Concern (LC)**

About the species

Hyperolius viridiflavus is a small, slender tree frog in the family Hyperoliidae. Adults are about 2-3 cm from snout to vent and weigh about 2 g. Females are slightly larger than males. The pupil is horizontal, the feet have extensive webbing, and the snout is short. The males have a large, inflatable vocal sac, and there is a large, granular skin flap on the throat.

The species is unusually variable. Many males keep the juvenile dress throughout life: brown to green with two pale stripes along the back. Females, by contrast, acquire an adult dress that can be uniformly pale green, light brown or heavily spotted and striped, and the feet are often brightly coloured. All animals have a dark, bluish band along the sides that shows through

the skin and is due to pigment in a belly muscle. The colours change with light and temperature and are often brightest when the frog sleeps in a bright, warm spot.

The species was described in 1841 by Duméril and Bibron under the name *Eucnemis viridiflavus*. The taxonomy is disputed because the pattern on the back varies so much. *H. viridiflavus* is often regarded as a species complex with more than 50 described subspecies, while others divide the complex into ten separate species. Animals in the trade are therefore seldom identified to subspecies and are often sold as mixed reed frogs.

Skin toxins have not been documented in the species. Amphibians are nevertheless handled only when necessary, and hands are washed after contact with the animals or the terrarium.

The species is short-lived. In the wild the adults usually live only about one year, because they seldom survive the long dry season, and in captivity too they age quickly once the breeding season is over. Expect a lifespan of 1-2 years.

Distribution and habitat

Hyperolius viridiflavus lives in eastern and central Africa: in Ethiopia, South Sudan and Sudan, Kenya, Uganda, Rwanda, Burundi, north-eastern Congo and north-western Tanzania. Most recorded finds come from Kenya, Rwanda, Congo and Uganda. The species has also been found in the Central African Republic, but the information from there is uncertain.

It is found from the lowlands up to about 2,400 m in Ethiopia and is common almost everywhere there is suitable habitat. It is assessed as least concern (LC) because of its enormous range and its ability to live in many kinds of landscape. Animals from West African populations that were formerly counted as this species belong, according to some authors, to other species.

> **Native range:** Ethiopia, South Sudan, Sudan, Kenya, Uganda, Rwanda, Burundi, Congo - Kinshasa and Tanzania.

HABITAT

Hyperolius viridiflavus lives in savanna, grassland and forest edges close to water. It sits on floating and standing vegetation at ponds, lakes, swamps, rivers and marshes, and it also manages in cultivated fields, in gardens and in built-up areas. Where it thrives, populations can be dense.

The species breeds anywhere from small waterholes to large ponds, most often in water that stands only part of the year. Breeding follows the rainy season, which lasts several months. The males gather at the water, call from open perches at dusk and fight over the spots. By day the frogs sleep on plants, often in full sun.

In the long dry season the young frogs that survive sit motionless on dry vegetation without eating or shedding. They lower their metabolism and retain water through a skin that both limits evaporation and absorbs moisture quickly when the rain returns. Temperature and humidity at the habitat have not been measured for the species. The climate resembles warm savanna with cool nights and heavy rain for part of the year.

Read more: Humidity, misting and ventilation

Care

THE ENCLOSURE

Four adults need a terrarium of at least 60 × 30 × 45 cm (length × width × height). The species is small but fast and uses the whole terrarium, so height and many perches matter more than floor area. A group of 5-10 animals needs at least 75 × 35 × 50 cm. A terrarium with a front door is better than one that opens from the top, because the frogs run upwards and jump towards the opening when disturbed. The lid must fit tightly and have fine mesh, so the air changes and none escape.

The frogs sleep on plants by day, so planting is important. Suitable plants are mother-in-law's tongue, small bird's-nest ferns, philodendron with large leaves and golden pothos. The plants are rinsed thoroughly and stand outside the terrarium for a few weeks, so fertiliser, leaf shine and pesticide residues disappear. Artificial plants also work. Branches of driftwood, bamboo and cork bark provide extra perches.

The substrate matters little, because the frogs seldom go on the ground, but it must be easy to keep clean. A layer of gravel under a mesh and a layer of moist sphagnum on top keeps the moss from becoming waterlogged, and the moss is replaced only every few months, as long as the terrarium smells fresh. Coconut fibre and soil mixes with plants also work. Moist kitchen paper is a simple solution for a quarantine box and is changed several times a week. Newly acquired animals are kept for the first month in a simply furnished terrarium, so they are easy to monitor.

Read more: Quarantine and hygiene

TEMPERATURE

By day the temperature in the terrarium should be 22-27 °C, and at night 18-21 °C. A drop of about 5 °C at night is natural and healthy. All lighting is switched off at night.

A small, warm spot of 29-32 °C under a weak heat bulb over a branch or a bamboo tube gives the frogs the chance to bask, and they often sleep right there by day with particularly bright colours. The rest of the terrarium is kept at the daytime temperature, so the frogs can choose for themselves. Keep the terrarium away from south-facing windows, and measure the temperature in several places with a digital thermometer.

Frogs that sit in the heat for long periods dry out. Signs of too low a temperature are loss of appetite and animals sitting hunched up. The species tolerates short fluctuations without problems.

HUMIDITY AND MISTING

Humidity should be 60-80%. Mist the terrarium with clean, lukewarm water every evening when the frogs wake, and preferably lightly again during the day. The frogs drink and absorb water from leaves and walls, so damp leaves are important. Let the terrarium dry out a little between mistings, and keep the air moving through mesh openings, so it does not become stagnant and mouldy.

In the wild the humidity alternates between rainy and dry season. If the frogs are to breed, mist heavily at least twice a day, and reduce the ventilation so the humidity approaches 80-100% for a period.

WATER AND WATER QUALITY

Place a wide, shallow water dish 3-5 cm deep in the terrarium, and keep it full at all times. The frogs are good swimmers, often sit in the water at night and dive down when startled. Give them an easy way out of the dish with stones, bark or a plant, so they do not drown. The water is changed every day, and dead feeder insects and droppings are removed at once.

The water must not contain chlorine or chloramine. Use tap water with a water conditioner, rainwater or reverse-osmosis water with added minerals for aquariums. Amphibians absorb water and dissolved substances through the skin, so soap, cleaning products, cream and hand sanitiser must not come into contact with the dish or the terrarium. The dish is rinsed with clean water.

LIGHTING AND UVB

The species needs strong light. Use fluorescent tubes or LEDs with a colour temperature of 5,000-6,500 K that cover the whole length of the terrarium, and switch them on 12 hours a day on a timer. Strong white light encourages colour and activity. An ordinary incandescent bulb gives heat but not good light.

No UVB requirement has been established, so UVB is optional. The frogs often sleep on plants in open terrain and get a lot of sun in the wild, so a fluorescent tube with low UVB output (Ferguson zone 1) is a reasonable addition. Place it over the mesh on one side, so the frogs can choose shade in the rest of the terrarium, and always provide plants that give cover by day.

Read more: Lighting and UVB

FEEDING

The species is a voracious little hunter that takes most insects the size of its head or smaller. The staple is small crickets of 5-8 mm and flying fruit flies. Vary with houseflies and small moths. Houseflies can be bought as larvae, are allowed to pupate and are stored as adults in the fridge for up to a month. The cold, stiff flies are sprinkled into the terrarium, where they wake up and give the frogs something to chase.

Feed 2-4 times a week with so much that everything is eaten overnight. If feeder insects are left in the morning, too much has been given. If everything is gone in a few minutes, it is too little. Allow 3-6 small crickets per frog per feeding. Young frogs are fed every day with fruit flies and very small crickets.

Dust the food with a phosphorus-free supplement with calcium and vitamin D3, and choose a supplement with vitamin A in the form of retinol, not beta-carotene, which amphibians cannot always use. Dust every other feeding and more often for young animals. Supplements are discarded once they have been open for three to six months.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements

BEHAVIOUR AND HANDLING

Hyperolius viridiflavus is nocturnal and fast. By day the animals sit still on leaves and panes, and at night they hunt, swim in the water dish and call. The call is tonal and resembles a xylophone. The males defend a favourite spot and call loudly, often after misting, so the terrarium does not belong in a bedroom. The females are silent.

The frogs are kept in a group of at least 4-6 animals, so you see their behaviour and can get them to breed. The males can fight over perches, so the terrarium must have many branches and plants, and there must not be too many males for the space. The frogs are so small and delicate that they should not be handled. If a frog must be moved, coax it into a small, transparent container.

Breeding

SEXUAL MATURITY AND SEXING

Males are smaller and slimmer than females and are recognised by the call and the large vocal sac, which is often coloured after a night of calling. Females are larger and thicker, and the eggs can be seen through the skin of a female that is ready to lay. Many males keep the juvenile dress as adults, while the females have a completely different and often more colourful adult dress, so sex can also be seen from the colours. The species reaches sexual maturity after 4-12 months, depending on climate.

MATING

The species breeds in the rainy season. The group should consist of at least three to four females and as many or more males. Feed generously and varied, preferably daily, until the females are clearly thick with eggs. Mist at least once a day and once at night, and reduce the ventilation so the humidity rises to 80-100%. When the males call loudly, also by day after misting, and the females are thick, the animals are ready.

Move them to a breeding chamber: a terrarium with 5-12 cm of water in the bottom, floating and protruding cork and driftwood and aquatic plants such as milfoil, hornwort, Java moss and frogbit. Long trailing stems of golden pothos over the water and over the branches give extra egg-laying sites. Alternatively the ordinary terrarium can be put a few centimetres under water if soil and moss are removed first. Water quality is decisive: dead feeder insects and droppings are removed, and at least half the water is changed every week. Water changes can in themselves trigger breeding. If it does not succeed within a few weeks, the animals are moved back to the ordinary terrarium, and a month is allowed to pass before trying again.

EGGS AND TADPOLES

The female lays the eggs in clumps on plants under water or right at the surface. The eggs sit in a jelly-like coat. A female can lay several clumps during the breeding season, at intervals of about 10-20 days, and a clutch typically holds several hundred eggs: from just under 100 to 800, on average about 330. There is no parental care, so the adults can stay in the breeding chamber, but the eggs are moved together with the plant to an aquarium of their own if the tadpoles are to be raised.

The tadpoles are omnivorous and feed on algae, plant parts and small particles. They also take crushed dry fish food and spirulina powder. An aquarium with a sponge filter and clean, settled water is enough. The water is kept at 21-24 °C, and an aquarium heater can be used. Change part of the water every week, and remove food remnants. Avoid overcrowding, because it causes slower growth and losses.

Read more: Rearing tadpoles

METAMORPHOSIS

The eggs hatch after 2-5 days, fastest in warm water. The tadpoles are about 4 cm long when the hind legs appear, and the forelegs appear after 8-16 weeks, depending on temperature, food and numbers.

Once the forelegs have appeared, the tadpoles stop eating and crawl out of the water before the tail is gone. Put a piece of cork, a branch or floating plants in the aquarium so they can get out, and fit a mesh lid, because the little frogs climb straight up the glass. Once they are out, they are moved to a rearing terrarium, and the water may stand no higher than 1 cm until the tail is absorbed.

REARING THE YOUNG

The newly metamorphosed young are moved to a small, ventilated box with moist kitchen paper, a shallow water dish and a few plants with broad leaves. Keep it moist, because the young dry out easily. After the first month they are moved to a taller terrarium.

Once the tail is absorbed, the young take flightless fruit flies and very small crickets every day. Dust the food with calcium and vitamins at every feeding. Sort the young by size so the smallest are not outcompeted. Young frogs have the juvenile dress, brown to green with two pale stripes on the back, and in females the adult colours come with age.

Health and common mistakes

Hyperolius viridiflavus is hardy, but animals from the wild are often thin and stressed. The typical problems are:

- Dehydration and too high a temperature. The signs are lethargy and wrinkled skin. Check the thermometer and hygrometer at once.
- Emaciation and intestinal parasites in wild-caught animals. Preferably buy captive-bred animals, and quarantine newly acquired animals.
- Infectious diseases such as chytrid fungus and ranavirus. Use separate equipment, and keep new animals apart from the rest of the collection.
- Weakened bones because of too little calcium and D3. Dust the food.
- Injuries from running into the pane or jumping out when the lid is opened. Use a front door.

A healthy frog is plump, reacts quickly and jumps away when disturbed, and has smooth, moist skin without scratches and sores. See a vet with amphibian expertise if the frog stops eating, has sores, swellings or reddish or cottony areas on the skin, or sits sluggish and emaciated.

Read more: Buying animals: captive-bred, wild-caught and transport

Always ask someone who knows

This guide is a good place to start, but it cannot replace experience. Animals differ, and much of what matters most is learned from people who have kept the species for years. Talk to a breeder, an experienced keeper or a vet who knows reptiles and amphibians before you get the animal - and again if anything looks wrong.