



Reproduction of the jewel fish tetra *Hyphessobrycon eques* (Steindachner, 1882)

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Abstract. This short article presents the aquarium breeding of the jewel tetra *Hyphessobrycon eques* (Steindachner, 1882). The jewel tetra, also known as the red minor tetra, serpae tetra or callistus tetra, is a species of tropical freshwater fish of the Characin family (family Characidae, order Characiformes). The data included in the paper come from the author's aquarist experience.

Key Words: aquarium, callistus, characin fish, red minor, reproduction.

Introduction. *Hyphessobrycon eques* (Steindachner, 1882), commonly known as the serpae tetra or jewel tetra, is a popular freshwater aquarium fish native to South America (Weitzman & Palmer 1997) (Figure 1). For those interested in breeding them in captivity, we present here a basic overview of their reproductive process in a glass tank. The data included in the work come from the author's aquarist experience.



Figure 1. The jewel fish tetra *Hyphessobrycon eques* (Steindachner, 1882); image by Muséum-Aquarium de Nancy/D. Terver for fishbase.org (Froese & Pauly 2023).

Tank Setup. Provide a well-maintained and appropriately-sized aquarium (at least 10 gallons for a small group). Ensure the tank is heavily planted with fine-leaved plants like java moss (*Taxiphyllum barbieri*) or floating plants to provide hiding places and simulate their natural habitat.

Water Parameters. This family of fish is well known for their preference for slightly acidic water. Acidification of water can be achieved with the help of peat. Maintain stable water conditions with a pH between 6.0 to 7.5, and a temperature range of 74°F to 80°F (23°C to 27°C). Keep the water clean with regular water changes to simulate their natural environment.

Group Composition. Fish to be used for breeding should be sexed two weeks in advance and kept separate. Keep a small group of serpae tetras (ideally 6 or more) to encourage natural social behavior and increase the chances of successful breeding. The ideal sex ratio for successful reproduction in jewel fish tetras can vary, but, generally, a balanced ratio of males to females is recommended. In many cases, a ratio of 1:1 or 1:2 (one male to one or two females) is suggested for breeding groups. Having a higher number of females compared to males can help distribute the attention and aggression from the males, reducing the chances of a single female being overly harassed. In a community tank, it is important to provide sufficient hiding spots and plants to create territories and give females places to escape if needed. While some level of competition among males can be natural and may trigger spawning behavior, having too many males for a single female can lead to excessive stress and aggression. It is essential to monitor the behavior of the fish closely. If you observe signs of aggression or if a particular female is being consistently targeted, it may be necessary to adjust the sex ratio or provide additional hiding places. Keep in mind that individual fish and tank conditions can vary, so it is always a good idea to observe the behavior of your specific group and make adjustments as needed. Providing a well-balanced and stress-free environment is crucial for the successful reproduction of jewel fish tetras.

Diet. Provide a varied diet consisting of high-quality flake or pellet food, supplemented with occasional live or frozen foods like brine shrimp or daphnia. A balanced diet supports overall health and reproductive potential.

Conditioning. Before attempting to breed, condition the fish with a nutritious diet, including live or frozen foods, for a couple of weeks, to enhance their health and reproductive readiness.

Triggering Spawning. Increase the water temperature slightly (within the specified range) and perform partial water changes with slightly cooler water to simulate the rainy season in their natural habitat. This change in conditions can trigger spawning behavior.

Courtship and Spawning. Serpae tetras are egg scatterers, meaning they do not provide parental care for their eggs or fry. They will scatter their eggs among plants or fine-leaved material in the tank. During courtship, the males may display intensified coloration and engage in chasing and fin-flaring displays to attract females. The female releases her eggs, and the male fertilizes them externally.

Egg Removal. After spawning, it is a good idea to remove the adult fish from the breeding tank to prevent them from consuming the eggs.

Raising Fry. The eggs will hatch in about 24 to 36 hours, depending on water temperature. The fry will initially feed off their yolk sacs. Once the yolk sacs are absorbed, you can start providing them with infusoria (e.g. *Paramecium*) or commercial fry food suitable for their small size.

Maintain Water Quality. Regularly monitor and maintain water quality parameters to ensure optimal conditions for the developing fry.

Please note! Breeding fish can be a complex process and success may require some trial and error. Patience, attention to detail, and proper care are key factors in successfully breeding serpae tetras in a glass tank (Furlan-Murari et al 2022). Aquarists should pay close attention to the recommendation not to release exotic ornamental fish into natural waters, as some species may become invasive in certain areas (Da Vitória Ludovice et al 2023).

Conclusions. Jewel tetra is a species of fish of the family Characidae, relatively easy to breed if you work patiently and observe the minimum conditions necessary for reproduction.

Conflict of Interest. The author declares that there is no conflict of interest.

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