

## Discus Fish History

### **A brief history of the discus fish, from Spix to Natterer to Heckel.**

*By Tony Silva*

Discus fish are the incontrovertible kings of the freshwater aquarium. This eponym can be attributed to their regal, slow movements, beauty and appearance, as well as their history, for discovery of the discus is linked with an imperial marriage.

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The history of discus fish takes us back to the early 1800s. History takes us back to the early 1800s. State Chancellor and Foreign Minister Clemens Wenzeslas-Lothar von Metternich-Winneburg (1773 to 1859) suggested to the Emperor of Austria, Franz I, that he marry his daughter Leopoldine to the heir of the throne of Portugal, Brazil and the Algarve. The marriage would not only link the houses of Hapsburg and Bragança, but would also enrich the Austrian imperial natural history collection.

#### Royal Naturalists

The royal entourage would be accompanied by a team of scientists, painters, researchers and academics. The men of letters included Johannes Baptist von Spix, Philipp F. von Martius and Johannes Baptist Natterer. Brazil at that time contained unknown secrets; the land was perceived to be brimming with wealth and its wildlife was an enigma. Evidence of the latter and the tremendous achievement of the expedition is seen the number of species named after the Austrians that accompanied the Archduchess Leopoldine. Spix had *Cyanopsitta spixii*, a macaw named after him. Martius had his name attached to the palm *Orbygnia martiana*. Natterer had the piranha *Serrasalmus nattereri* and a parrot *Amazona ochrocephala nattereri*, to give just a few examples.

An expedition to learn about nature in Brazil fell in line with the thinking of the Austrian royal family, who were very interested in nature. The Emperor had commissioned a garden in Schönbrunn, which later became a zoo. Leopoldine herself kept a parrot, white foxes and bantam chickens.

Eventually, most of the expedition members returned to Austria, but Natterer persisted, chartering unknown territory. Many travails besieged him; he lost Sochor, his companion, he almost died, and he lost many important documents, animals and plants. He survived and endured, eventually reaching Barcelos on the Amazon.

#### Discovering Discus

Between 1831 and 1834, a discus fish was caught in his nets. I have walked the streets of Barcelos, known for its importance in the cardinal (*Paracheirodon axelrodi*) trade, and have wondered how it must have looked at the time of Natterer's visit. I suspect the jungle has changed little; the town itself on the other hand has unquestionably seen many changes in its history. For one, it is an important gathering point for the export of tropical fishes.

Natterer reached Austria on August 13, 1835. His collection trip lasted 18 years. During this time, he acquired 1,671 species of fishes, 1,146 mammals, 1,024 types of mussels and many others. In all, Natterer returned to Austria with more than 50,000 well preserved specimens, many totally new to science. Natterer was also the first European to hold a discus fish in his hands.

One of the scientist to work on Natterer's collection was Johann Jacob Heckel, an ichthyologist and systematist working at the Natural History Museum in Vienna. In 1840, Heckel described the unusually shaped cichlid that Natterer had obtained in Brazil. He called it *Symphysodon discus*. That fish is now commonly called the Heckel discus fish in the aquarium trade.

#### Heckel Discus

The Heckel is the most unique discus fish. The other species are not difficult to breed; even wild discus fish will breed in water conditions far removed from those in the wild. The Heckel, however, requires an acidic and soft water. In the wild, the pH of the water it is found in can be as low as 3.2 and never above 5.0.

The Heckel will thrive in an aquarium with a higher pH but a pair simply will not breed. Indeed, the few that have achieved success have done so by replicating water conditions similar to the wild. Hybrids with other discus fish species have

been produced, but invariably involve a male Heckel who is literally forced to spawn by a female discus fish of another species.

The lack of demand for the Heckel — aquarists want spectacularly colored strains and not wild fish — has contributed to the Heckel not being domesticated, which would have resulted in easier to breed fish generation after generation. The common angelfish was at one time as difficult to breed as the Heckel, but persistence and demand resulted in continued breeding. Today tank-raised angelfish are so easily spawned that even a novice can achieve success. Tank-raised angelfish are not demanding in terms of fish food, water conditions or even water temperature. We see a very changed situation when we compare domesticated angelfish to their wild counterparts, which like Heckel discus, are bred by pairing a wild male with a tank-raised female, who also forces the male to spawn.

An example of the lack of interest in the Heckel is seen in Asia, the center for discus fish breeding. As I write this, I am flying from Singapore to Tokyo. While in Asia, I visited many commercial discus breeding operations in Indonesia, Malaysia and Singapore, and not one kept Heckels. None find it commercially viable. Only an old friend in Johor Baru in Malaysia breeds the Heckel and has done so for many generations, but he produces only a handful of fish and then simply for his own enjoyment. The effort and expense would never make it viable for him to rear them in large numbers. He has a keeper that cares for the dozen or so aquariums and whose job is to collect rainwater, feed the Heckels live fish food and keep them immaculately clean.

This difficulty in breeding the Heckel and lack of interest from a commercial perspective is unfortunate, for the Heckel has the most perfect round body of all the discus fish, the desired shape in a discus. Their striations are near horizontal, which adds to their beauty. The dark first, fifth and ninth vertical bars are considered by some unattractive, but I find that they add to the beauty. It is also more regal in its movements. It is beautiful in its own right. Perhaps one day, when interest in discus fish focuses again on wild fish, as it has in the past, someone will look at breeding the Heckel commercially. Until then, aquarists will have access to wild Heckels that each year are exported by the hundreds from Manaus in Brazil.