

Collecting *Pelvicachromis* Species in Cameroon (Full Article)

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A devoted explorer travels to Africa to collect and bring home some of his most beloved aquarium species.

The cichlid genus *Pelvicachromis* is one of the most popular groups of fish in the aquarium hobby. The common krib *P. pulcher* has been established in aquariums since the 1960s. Other species from this colorful genus have been known to science and hobbyists for a long time, but a relatively recent flood of krib exports from West Africa has generated a lot of new interest. The nation of Cameroon is well known for being the home of many varieties of *P. taeniatus*. There is also a population of *P. pulcher* in Cameroon that is very rare in the hobby. In February of 2009, I was fortunate to be able to travel to Cameroon to collect some of these fish. We visited several of the best-known locations where *P. taeniatus* are found, as well as the area where the rare *P. pulcher* is located.

Beginning in Ndonga

The expedition began just south of the port city of Douala in an area known as Ndonga. This interesting region consists of several small coastal watersheds that sit between the large Sanaga River valley to the south and the widespread Wouri River system to the north and east. The drainages of Ndonga start less than 20 kilometers (12½ miles) from the Atlantic Ocean and run off quickly to a very short brackish river or directly into the ocean. The cichlids inhabit only the freshwater streams of the watershed. Ndonga is the only area where *P. pulcher* is known to exist south of the country of Nigeria.

The stream we collected in is broad and shallow, with a sand and gravel bottom punctuated by sporadic larger rocks. The center of the stream flows faster than the edges, and it is this difference in flow that scours sediment from the middle of the stream and deposits it along the sides, resulting in the middle of the stream being rockier than the edges. The shoreline is somewhat muddy and has dense growths of marginal plants. The only truly aquatic plants we saw in the area were some *Nymphaea* water lilies.

The water parameters at that time of year (near the end of the dry season) were pH 7.0, TDS 10 ppm, and a temperature of 24°C (75°F). Except for minor fluctuation in the TDS, these parameters were encountered all over Cameroon in waters where *Pelvicachromis* species were collected.

The Ndonga population of *P. pulcher* is most likely a remnant from a time many thousands of years ago when the coastline between Cameroon and Nigeria extended much farther out into the Atlantic Ocean. Locating the *P. pulcher* was frustrating. We first concentrated on the densely vegetated areas along the shoreline using a large seine, but only captured a few juvenile specimens. We eventually found adult fish holding small territories around the bases of the larger rocks in the center of the stream, which is not the classic *Pelvicachromis* habitat in which most species are found.

The seine was useless around these large rocks, so collecting the few adult *P. pulcher* we were able to locate required the patient and slow encirclement of a single fish and its rock with hand nets. Once the nets were in place, the fish was spooked away from its hideout and into one of the surrounding nets. This process was slow but effective, and we were able to capture several adult pairs in about three hours of work.

The Ndonga population of *P. pulcher* looks very different from the well-known Nigerian and tank-strain forms. Both sexes have rich chocolate browns over most of their body with creamy yellow stripes down their sides. The females have a pinkish belly that brightens when they are displaying for territories or mates, and a lot of iridescent yellow in their dorsal fins. Some of the males have very small ocelli in their fins, but these are not nearly as prominent as the ocelli seen on Nigerian or tank-strain kribbs. The Ndonga *P. pulcher* looks very similar to the giant krib of Nigeria (*P. sacrimontis*), which was considered a color form of *P. pulcher* for many years.

The Ndonga region is also home to a population of *P. taeniatus*. It is a very robust form of the species, with a color pattern similar to both the northern Cameroon varieties and the southern Cameroon varieties. Male *P. taeniatus* "Ndonga" are mostly tan and brown like northern populations, but they only have a few large ocelli in their tails like the males of southern populations. The females show orange-yellow fins and pearlescent purple abdomens like more southern populations, but they have greater numbers of spots in their dorsal and caudal fins like females in the northern populations do. Both sexes exhibit a bright-red cheek bar under the eye, which is a characteristic associated with some of the southern populations. Perhaps the *P. taeniatus* from Ndonga will be found to be an intergrade form created from northern and southern populations that somehow ended up overlapping in Ndonga.

Collecting in Moliwe

The best-known Cameroonian wild form of *P. taeniatus* comes from the region of Moliwe near the coastal city of Limbe in the far northwest of the country. *P. taeniatus* "Moliwe" is one of the prettiest morphs that is exported in large numbers and is probably the easiest *P. taeniatus* to breed in captivity, making this fish popular and relatively common in the hobby. The males of the Moliwe population grow larger than those in other populations, and their coloration is spectacular, especially the bright-yellow caudal fin that contains many black spots.

laminas, fast flowing, and rocky, with a lot of sand between the rocks. The only aquatic plant we found there was *Crinum natans*, though the margins of the stream have thick growths of a grass-like dwarf bamboo growing out over the water.

P. taeniatus "Wouri" is a unique variety that may be a distinct species. The males are overall a drab brown in color, and the caudal spots are merged together into a solid bar along the upper edge of the fin. The plainness of the males is made up for by the brightness of the females, which have a bright pink-red abdomen that is bordered in the front and back by darker pigments that can become close to black, and above by a patch of yellow iridescence just over the lateral line. This body pattern, combined with a bright-yellow face, dorsal fin, and tail makes the females very striking and very different from any other *Pelvicachromis*.

Traveling Around Kribi

Southern Cameroon is home to several populations of *P. taeniatus*. The hub for our collection excursions for the southern region was the resort city of Kribi. When the *P. taeniatus* from this area were originally described in the 1930s they were placed in a species of their own called *P. kribensis*. A revision of the genus in the 1960s grouped them together with other populations identified as *P. taeniatus*, which is an older name, so the *P. kribensis* name was abandoned. The popular name "krib," which is used to describe all species in the genus (and most frequently *P. pulcher*), was originally attributed to the *P. taeniatus* population from around the city of Kribi.

South of Kribi is the Lobe River system. This is a blackwater river with relatively slow-flowing streams. Even though the water contains a lot of tannins and is slow moving, the pH was still 7.0. The biodiversity of the Lobe system is huge. We found more different species of fish here than in any other location we visited. Other than the *P. taeniatus*, we found the cichlids *Chromidotilapia guentheri*, *Benitochromis batesii*, and *Hemichromis elongatus*. Characin species included a tetra in the genus *Brycinus* and *Neolebias ansorgii*. Killifish included an *Aplocheilichthys* sp., a *Procatopus* sp., a *Chromaphyosemion* sp., an *Aphyosemion ahli*, and an *Epiplatys sexfasciatus*. We also captured electric catfish *Malapterurus* sp. and *Mastacembelus* sp. eels. The *P. taeniatus* from the Lobe system are unique in that the males do not have any dorsal or caudal fin ocelli, but these fins are instead trimmed in bright red or orange. All of the known populations of *P. taeniatus* found in and south of the Lobe watershed have this same spotless characteristic.

There are several populations of *P. taeniatus* found in separate watersheds in a region stretching between the Sanaga River (just south of Ndonga) and south to the Kienke River that enters the Atlantic Ocean in downtown Kribi. These populations are distinctive in that the males all show a few large ocelli in their caudal fins. The habitats vary greatly, from medium-size streams in the Kienke system to small streams (so small it is hard to believe there are cichlids in them at all) in the Dehane and Lokoundje areas. The varieties from this area are well documented and exported from Cameroon in enough numbers to make wild fish available periodically each year. All of the varieties in this area look similar with some minor differences in the number and size of spots, though there is considerable variability between specimens in each population. They are so similar to each other and yet variable within their populations that unless one is absolutely sure where the fish were collected, it is impossible to say for sure where an unidentified fish comes from. The females are even harder to differentiate. This is why it is important to obtain fish from reputable importers and dealers, and make sure that a fish from a known area is not bred with a fish from unknown origins even if they look a lot alike. These populations of *P. taeniatus* are reproductively separated from each other in the wild.

Collect in Cameroon

Cameroon is a wonderful place to visit on a fish-collecting expedition. The people are friendly, and the countryside is beautiful. There are many different habitats to explore, and access to them is not too difficult. There are also many different fish to see and collect, including the widest variety of *P. taeniatus* in West Africa and a unique population of *P. pulcher*. I am looking forward to my next opportunity to visit Cameroon and see what else I can find!

