

Altolamprologus again...

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Altolamprologus after tropeuses are representatives of the Lake Tanganyika which usually host aquariums. What has decided about so much interest and the enormous popularity of these fish? Maintain extremely interesting, wonderful, dignified appearance, and perhaps not too great demands on tank capacity? Lets's summarize information about altolamprologues.

Systematic interpretation

In 1898 Boulenger has discovered two new species from Lake Tanganyika and classified to be kind of Lamprologus, they were: Lamprologus compressiceps and Lamprologus fasciatus. "Calvus" in the absence of significant differences in relation to the "compressiceps" was treated as its color variety for what wasn't described scientifically by Poll until 1978. The first specimen A. compressiceps was caught in Mpulungu (former name Kinyamkolo) in Zambia. Syntypes: BMNH 1898.9.9.4-5 (2). However, the first specimen of A. calvus was caught at Chipimbi in Zambia 6 July 1977

In 1986, these species were isolated in a separate genus, which is called Altolamprologus. Currently, the type Altolamprologus includes: A. compressiceps (Boulenger 1898), A. calvus (Poll 1978) and an undescribed species A. sp. „Compressiceps Shell”. Classification of "fasciatus" to type Altolamprologus found no scientific justification. In 1985 Colombe and Allgayer put it in such Neolamprologus, which in 2007 finally confirmed Koblmüller. Name Altolamprologus fasciatus is still used by the Ad Konings and on www.cichlidae.com.



Altolamprologus calvus Congo Black Pearl

The genus name comes from the Latin word altum which means high and lampas which means light, torch. The name "compressiceps" comes from the Latin compressus, a compression,

pressure (compressio - compression) and ceps (cephala), means head. This is a reference to a laterally flattened head (and body) of the fish. The name "calvus" also comes from Latin, where the calvus is bald, and comes from the fact that *A. calvus* not have scales on its head.

International Union for Conservation of Nature (IUCN) has listed *A. calvus* to the Red List of Threatened Species, as NT (near threatened), which is close to danger (2006). The degree of species endangerment *A. compressiceps* considered LC which means least concern (2006).

Differences between species

At first glance it is difficult to distinguish between "calvus" and "compressiceps", but there are a few features that can help us. On the other hand, it seems that no one will have no problem with the diagnosis of a much smaller *A. sp. „Compressiceps Shell”*. The differences between him and *A. compressiceps* documented and described from specimens caught in Burundi and the northern coast of the Democratic Republic of the Congo, Koblmüller (2007) (see Table 1, Pict. 3).

Table 1. Differences between *Altolamprologus*

Species feature	<i>Altolamprologus calvus</i>	<i>Altolamprologus compressiceps</i>	<i>Altolamprologus sp. „Compressiceps Shell”</i>
Body size	male up to 15 cm, female up to 8 cm	male up to 15 cm, female up to 8 cm	male up to 5,5 cm, female up to 4 cm
Recess over the eye (see Pict. 1)	does not exist	explicitly marked	slightly marked
shape of the snout (see Pict. 1)	elongated, flat	shorter, steeper	shorter
Upper jaw in relation to eye line (see Pict. 3)	does not reach	does not reach	reach
The shape of pectoral fins (see Pict. 2)	narrower and longer	wider at the base	wider at the base
Dorsal fin base lenght to total lenght ratio	?	55-65%	53-57%
Number of scales on the bottom lateral line	?	9-10	3-9

Lenght to height ratio (with fins)	about 1,85:1	about 1,7:1	about 1,7:1
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Numerous of controversies are stirred up by the presence and the nationality of the fish species known *Altolamprologus* sp. „Sumbu”. The name in this case may be misleading, because it does not come from the trapping site. The first specimens "compressiceps" were trapped in Sumbu in Zambia, hence the name *A. sp. „Sumbu”*. Further, although caught in other locations, still (wrongly) called *A. sp. „Sumbu”*. Last name is also used for individuals whose hallmark is the size of the body, which is intermediate between that achieved by "compressiceps"; and "compressiceps shell". Interestingly, no further information on the location of their catch, and no observations from the lake. In such a case there are only in few aquarists aquariums? On this question, we are not able to clearly answer, but it seems that there can be no question about it, that it is a form intermediate between the species *A. compressiceps* and *A. sp. „Compressiceps Shell”*.

Place of occurrence

Although *altolamprologuses* occur in almost the entire lake area (see maps of species distribution) are rather uncommon fish. Never occur in the colonies. Most often found are single, looking for food animals. Only when a large bit of luck you can admire the couples caring for fry (information from E. van Ammelrooy and M. Buckland).

Adult *Altolamprologus calvus* and *Altolamprologus compressiceps* are found in littoral rock to a depth of 30-40 m, usually near vertical walls with many cracks and nooks (according to data posted on www.cichlidae.com, shown in Herrmann (2002), this is much less depth: 1-15 m). Juveniles are found in the shallows, hiding in shells which cover bottom. Youth brought up on the rocky areas (hence the gray coloration) (information from E. van Ammelrooy and M. Buckland).

According to information obtained from Michael Buckland, owner of ACA Ltd., a firm yield of fish from Lake Tanganyika, both species can be found in the same locations, such as Chaitika, Zambia. Confirmation of these data found on page www.cichlidae.com, where it is stated that it is in the southwestern part of the lake.



Pict.1. *Altolamprologus calvus* head (left) in comparison to *Altolamprologus compressiceps* head (right) with marked differences, side view.



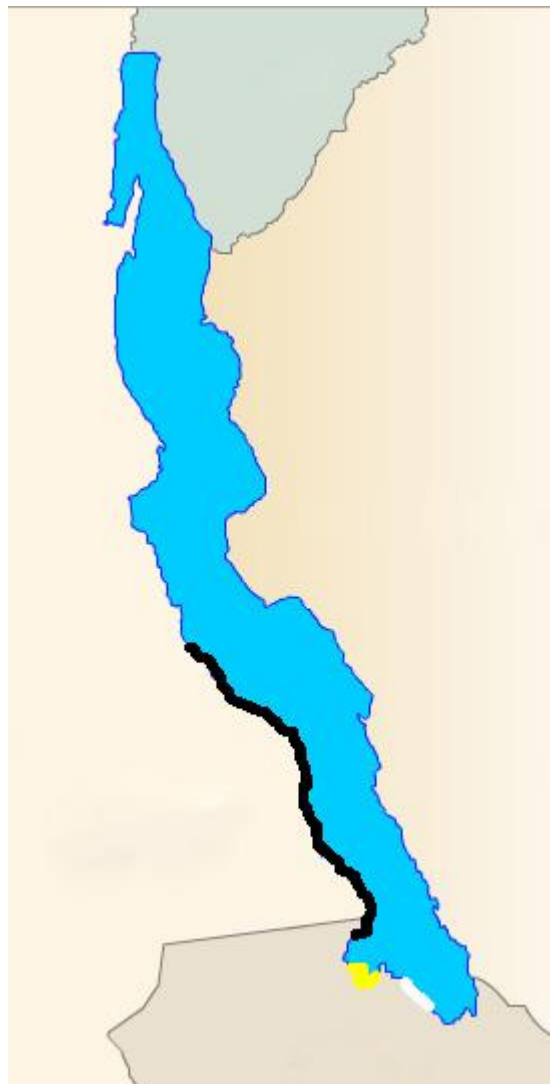
Pict.2. Pectoral fins comparison *Altolamprologus calvus* (left) and *Altolamprologus compressiceps* (right) , side view.



Pict.3. *Altolamprologus* sp. "Compressiceps shell" head (left) in comparison to *Altolamprologus compressiceps* head (right) with marked differences, side view.

The natural environment of *Altolamprologus* sp. "Compressiceps Shell" are open, sandy areas of the lake, at depths from 10 to 40 meters. Fish wander them alone in search of food. In an emergency, they hide in the empty shells of snails. But do not attach to them on a permanent basis, except for the spawning period. Young "shells", as is the case with "big brothers", are growing up in coastal, shallow parts of lakes.

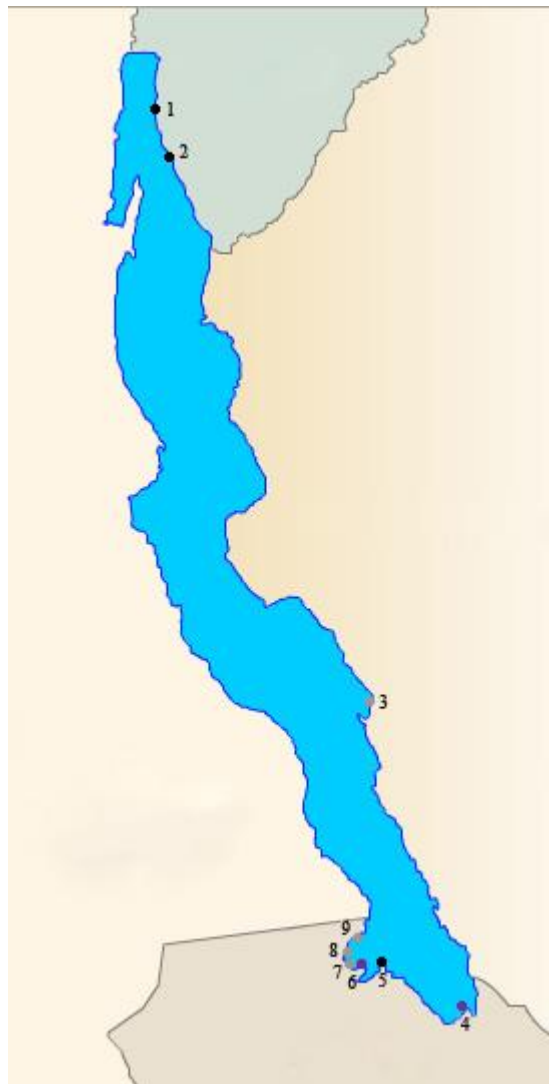
Occurrence areas in the lake A. sp. „Compressiceps Shell” and A. compressiceps partially cover (eg, Cape Nangu in Zambia). The emergence of a new species, which is "Compressiceps Shell" is thus an example of sympatric speciation, ie formation of new species that are distributed geographically. In this case we are dealing with ecological isolation, namely the occupation by the populations living at the same area of other habitats. This is due to the existence of interspecies competition. To defend itself against harmful competition, fish have developed mechanisms enabling them to reduce their level, or can be completely prevented. One way to become a separate ecological niche (multidimensional space, potentially available to the body) consisting of the spatial diversity. Altolamprologus compressiceps remained in the littoral rocky, while Altolamprologus sp. "Compressiceps Shell" sites previously unused by altolamprologus - sand littoral. Following the isolation of the organic with the time probably appeared to reproductive isolation. It is not known whether the process of speciation, in the case of A. sp. „Compressiceps Shell”, has ended. Specific genetic tests will give answer to this question.



Map 1. Distribution of *Altolamprologus calvus* color varieties. White color - *A. calvus* White, Yellow - *A. calvus* Yellow, Black - *A. calvus* Black



Map 2. Distribution of *Altolamprologus compressiceps*. Yellow color – *A. compressiceps* Gold/Yellow/Orange; orange – *A. compressiceps* Gold Head/Gold Face; red – *A. compressiceps* Fire Fin/Red Fin; green – *A. compressiceps* Green, gray – *A. compressiceps* Zebra; black – *A. compressiceps* Black



Map 3. Known places of occurrence of *Altolamprologus* sp. „Compressiceps Shell”. 1 – Rutunga; 2 – Rumonge; 3 - Kabwe; 4 – Mbity Island (= Kumbula Island); 5 – Cape Nangu; 6 – Sumbu; 7 – Cape Kachese; 8 – Chimba; 9 – Cameron Bay. Black color – *A. sp. „Compressiceps Shell”* Black (location 1, 2, 5); Violet color – *A. sp. „Compressiceps Shell”* Violet (location 4, 6); gray color – *A. sp. „Compressiceps Shell”* Gray (location 3, 7, 8, 9)

Geographical variations and color varieties

Altolamprologus are probably the most commonly described in the Internet fish from Lake Tanganyika. As always there are pros and cons of such a situation. Unfortunately, a vast amount of information is untrue, and posted pictures wrongly signed. With great chaos in the naming of *altolamprologus* are responsible companies of trapping and selling fish. Often they do not indicate trapping sites, and only color varieties or so-called trade names. It also happens that given trapping sites of *altolamprologus* are wrong. This is probably due to the secrecy associated with the yield attractive and colorful varieties and competition between firms which catch fish in the lake (the information obtained from E. van Ammelrooy, M. Buckland and M. Mierzenska). This situation entails a cascade of errors and misunderstandings. Based on information found on the network we have made a list of known geographical variations and color varieties of *Altolamprologus calvus* and *A. compressiceps*. It should be emphasized that this is merely a set of operating data on the Internet. According to many people interested in tanganyikan habitat, colour varieties such as Fire Fine, Orange Fin and Red Fin don't differ among themselves, the same applies to the varieties Gold Head and Gold Face and varieties:

Gold, Orange and Yellow. Looking through hundreds of photos on the internet and watching a lot of geographical variations and varieties of the genus *Altolamprologus* at Tanganyika *Tropheus* only remains for us to share that view ([see table 2](#)).

In comparison with the enormity of the "large" representatives of *altolamprologuses*, information regarding the prevalence of *Altolamprologus* sp. „*Compressiceps* Shell” are negligible and vague. Here are a few, well-known geographical variants of *A.* sp. „*Compressiceps* Shell”: Cameron Bay[^], Cape Kachese^{^*}, Cape Nangu, Chimba[^], Kabwe, Mbity Island, Rumonge, Rutunga, Sumbu. Especially noteworthy are the black varieties, which occur both in Burundi (Rumonge, Rutunga) and in Zambia (Cape Nangu).

Physique

These fish are characterized by (as the name suggests) a tall, narrow, laterally flattened body. This shape allows to stay in narrow rock crevices, in which they don't only alive but also acquire food. Such a body structure, but with a much smaller size, works well even when living in shells that have chosen the smaller of the genus - *A.* sp. „*Compressiceps* Shell”.

Altolamprologuses feed on tiny crustaceans, fish eggs and fry of other fish. Such a diet requires additional adjustment, after all, the vast majority of fish in the Tanganyika are cichlids, which when you try to attack the young is the risk of furious defense of the parents. *Altolamprologuses* hulls are very durable. Formed like a breastplate, on which fish may take a very strong blow, without any harm, and the huge jaws and strong teeth allow them to swallow whole prey several centimetres long.

Sexual dimorphism

In all representatives of types differences overlap. Females reach a maximum of 60% of the adult male body length (in the case of breeding females often it can be even 30%). The end of the dorsal fin of adult males is elongated and pointed, and female is rounded. Males also have elongated ventral fins. In addition, in the period preceding spawning, the female is clearly visible a podgy tummy.



Altolamprologus compressiceps Chaitika Orange Fin

Reproduction

Altolamprologuses are free hatch fish. The female chooses a hiding place (crack rock or shell), the entrance to which is too small for the male. Placed in it up to 200 grains of roe (in Altolamprologus sp. "Compressiceps Shell" this number does not normally exceed 50 units). The next step is a mating dance, which culminates in eggs fertilization. Over the next three weeks the male patrols the area around the shelter. During this time partner is staying inside. Her task is to direct fresh, oxygenated water to spawn. The larvae hatch nonsimultaneously. Many young altolamprologuses are killed by predators lurking before female hideaway. Those who manage to survive, hide in the quiet coastal waters to a depth of several meters. This area provides the right amount of food, at the same time is free from predators, which are reluctant to venture into the shallows. Small altolamprologuses grow slowly. After a year, reaching a length of 4 cm. Then they lose masking gray color, which is replaced by "adult coloration". Sexual maturity is more or less gain after two years.

In the aquarium spawning is preceded by thorough cleaning of shelters (mostly shell) by the female. During the incubation of eggs and fry, female almost never leave shelter, even during feeding (which often inspires fear beginner aquarists). At a time when the first young are beginning to emerge from hiding, the female makes sure that they do not receded too far. Collects fry with sand and thrown back into the shell. It also happens that the young individual are collected to shell by male.



Altolamprologus calvus Chaitika White

Aquarium for altolamprologuses

Minimum tank for "large" altolamprologuses is approximately 100 liters. It will be suitable at most for a couple of fish. This configuration works but only with those who wish to propagate

the fish, because the lone pair usually spends most of his time in hiding. Bigger pool of natural behavior can be observed only in the bottom of the tank with dimensions of at least 120 x 40 cm. In simple terms it can be assumed that the couple of "big" altolamprologuses require approximately $\frac{1}{4}$ m² of bottom. However, and this confirms the principle that the bigger tank is better.

As mentioned earlier, "calvuses" and "compressiceps" are inhabitants of the littoral rock as the tank should be mapped precisely this part of the lake. It should be arranged so as to find rocks to create numerous gaps and curves. Individual male zone should be clearly separated from each other (it's best to fish do not have eye contact.) On the ground you can put sand or gravel. Plants, if are, there are not destroyed. They can be a refuge for the fry. Although the "big" altolamprologuses in the aquarium, both for shelter and spawning place females choose the most shells (this phenomenon does not occur in nature). However, please note that they must have the appropriate size, or be large enough to fit in them all female, but small enough to not fit in them male. In the tank should be more shells than females, so that the fish had a choice. Important is that the shells have not sharp tabs. Before you put the shells in, the tank should be cleaned and boiled.

In turn Altolamprologus sp. „Compressiceps Shell” will satisfy even a small tank. For couples just 50 liters, and the bottom surface of the aquarium 80 x 40 cm can be tempted to breed up to 10 individuals. Must be in the sandy area with lots of shells (even after a few pieces of fish). Excellent shells are Neothauma tanganyicense or other sea or local snail with similar shell size. If you plan on educating the young, is also useful rubble of stone (where the babies will spend the first months of life). It should be remembered for ensuring stable parameters of water (as in small tanks can be quite difficult)! I guess we do not know any fish that is also sensitive to the above factor.

The water in the tank for altolamprologuses should have parameters, such as for the other inhabitants of Lake Tanganyika: pH 7,8-9, GH 12-20, KH 14-20, temperature 25-28°C. Fish best withstand frequent, but small water changes (up to 10%). It is definitely remember about tight covering of the tank, because frightened altolamprologuses can jump very high.



Altolamprologus sp. "compressiceps shell" Cameron Bay

Feeding

Altolamprologus are typical carnivores. They take every living and frozen meat food: glassworm, brine shrimp, chironomidae, as well as shrimp, clams and shredded pieces of fish. Diversification of the diet is other fish fry which should be borne in mind if you want to reproduce the accompanying species. After earlier habituation, fish readily take flake and granular food.

Young "altolamprologuses" are given the larvae of brine shrimp, alive or frozen cyclops and pounded flakes intended for carnivorous fish. Young altolamprologuses have very little muzzle what should be borne in mind when we are selecting food.



Altolamprologus calvus Yellow

Company for altolamprologuses

Altolamprologuses can live in species tank or multi-species tank. A good company may be other carnivores from Tanganyika such as: neolamprologuses, lepidiolamprologuses, julidochromises, telmatochromises, cyphotilapies, synodontises and floating in the depths of representatives Cyprichromini.

Although there are conflicting views on the merger of various altolamprologuses species in the aquarium, in our intercourse "calvus" and "compressiceps" works for many years. However, please note that you can not combine different variants of the geographic and color varieties of each species.

Society for the "shells" can serve representatives of all non-aggressive of faun of the lake, who have similar food preferences and a similar size. Avoid territorial shell dwellers that might bother altolamprologuses which are usually quiet.



Altolamprologus compressiceps Nangu Black

Breeding experience

Altolamprologus calvus Congo Black Pearl WF are first fish from Lake Tanganyika, which appeared in our tank. They lived in a 112 l aquarium, in the company of couple *Julidochromis regani*. After initial problems with pair up and large shyness of fish, the situation stabilized. After some time the fish moved to a 200 l aquarium. Starring tank is: a pair of *A. calvus* Congo Black Pearl, 2 pairs of *A. compressiceps* Gold and a pair of *Lamprologus fasciatus*. In the tank there was a consensus, two pairs of altolamprologuses and "fasciatus" regularly coming up to spawn. Then the cast joined *Cyprichromis* sp. „Leptosoma Jumbo” Mpimbwe Yellow Head. It quickly became clear that the change to a larger tank is needed - 375 liters Place of "calvus" couple from trapping, took nine F1 juveniles, reared in an aquarium designed for rearing fry. Young took about a year and 3-4 cm in length, sexual dimorphism was not pronounced. Currently, adult "calvus" F1 live in 1260 l tank accompanied by: *A. compressiceps*, *Neolamprologus prochilus*, *Lepidiolamprologus attenuatus* Yellow, "Gnathochromis" pfefferi Chaitika, *Lamprologus. similis*, *Cyphotilapia frontosa* Bulumbora, *Mastacembelus moori* and herd of *Cyprichromis* sp. „Leptosoma Jumbo” Mpimbwe Yellow Head. Males gladly seized land directly on the rocks and in rock cracks. Females usually stay in the area of their choice, appropriate size of the shell. Altolamprologuses males compete with each other, ruffled up, pushing, all of these are harmless and end it leaves the loser in another part of the aquarium. Both species altolamprologuses which occupy aquarium regularly spawn, but with the existing cast reared juveniles is impossible.

Altolamprologus sp. „Compressiceps Shell” Cape Kachese appeared in our country four years ago. A few of these fish we put in 50-liter tank. For the first month the fish were very skittish. Any movement near the tank caused an immediate hide in the shells. All observations were difficult. Imagine our surprise when, in a relatively short time the couple fry. Subsequent spawning took place regularly. With each litter remained, only a few individuals stayed, the rest was eaten by the "elder brothers". Then the parents and the young have moved to the 112 liter

tank, where grew up to adulthood of about 30 fry. After several years of "shells" were transferred to the tank 375 liters, which in addition to them were: *Limnochromis auritus*, *Neolamprologus similis*, *Microdontochromis tenuidentata* and a stock of *Paraciprychromis brieni* Kitumba. "Shells", although the smallest, by the roommates were treated with respect. Other fish did not get in the way, but also allowed the seizure of their territories. This situation is particularly displeased with "similises" which, after one of the substitutions used the temporary incapacitation of water "shells" and captured the territories of males on the occasion of maiming them gently (bitten tails). After this incident *Neolamprologus similis* were immediately transferred to another container. Other fish live in harmony today.

In summary, smaller and single-species tanks are very useful when you want to breed or raise young altolamprologuses. However, if we are interested in observing the entire spectrum of behavior of these very interesting fish, it is necessary to place them in a much larger tank with a diverse cast. An interesting solution (requiring a larger aquarium) is also having more fish of one species (which we heartily recommend), or a combination of two species of altolamprologuses.

An important issue is to purchase altolamprologuses. You can buy adult fish in which sex is known for particular individuals (in the pair, harem, group), or some young fish. Of course, every solution has its advantages. However, note that the selection of pairs of adult fish is not an easy thing. There is no any rule. We know this well, because we went through it. Fish have to match both the size and the "temperament". Too little, or not ready to spawn female will still run and hide from the male. She cannot come out of hiding and do not eat even a few weeks. In this case, it is necessary to buy extra fish or replacement of the female fish.

Although it appears that a altolamprologuses said and written everything, we decided to collect and systematize this sea of information. We hope that we managed to introduce these wonderful fish and encourage to learn about them in a new way ...

Greeting

We thank Michelle Buckland and Evert van Amelrooy for all information about Altolamprologuses in the natural habitat.

[Table 2. Geographical variations and color varieties of *Altolamprologus calvus* and *Altolamprologus compressiceps*](#)

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