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# NEWS

The Magazine for Aquarists and Terrarists



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Filialen mit Zoofachabteilung



## Mailed catfishes

# Orange-spot mailed catfishes - now is the season!

by Sarah Nieten

Mailed catfishes of the genera *Brochis*, *Corydoras*, *Aspidoras*, and *Scleromystax* are among the most popular of all aquarium fishes. They include both group-forming and solitary species, dwarfs measuring only around two centimeters and giants of almost 12 centimeters eventual length, colorful and camouflaged species, some liking cool conditions, others warm - in short there is a suitable mailed catfish for practically every aquarium. And now is the season for one of the most attractive groups of mailed catfishes that all share the common feature of a bright orange dorsal spot, but which usually aren't closely related to one another.



Some orange-spot mailed catfishes are very difficult to determine. For example, the body form of this attractive fish corresponds more to *Corydoras duplicareus*, the coloration to *C. adolfo*  
Photo: S. Nakano

In fishes color pattern is a very important character for recognizing conspecifics. In some species the bright orange or yellow spot on the nape serves to keep the group together. Other species imitate shoaling

species but only because in this way they obtain better protection from predators. As mailed catfishes don't taste good. Their external bony armor, which gives them their popular name, makes them difficult to digest

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Pair of *C. adolfoi*, female left. Females are similar to *C. duplicareus* in color.

Photo: F. Teigler



*C. nijsseni*, female above, male below.

Photo: H. J. Mayland



Another color variant of *C. nijsseni* with a broad dorsal band.

Photo: F. Teigler



The black dorsal fin distinguishes *Corydoras burgessi* from *C. adolfoi* and *C. duplicareus*.

Photo: H. J. Mayland

and in addition they have sharp, rigid, and sometimes even poisonous dorsal- and pectoral-fin spines. A bird or other predator that has once eaten a mailed catfish will remember this unpleasant experience and subsequently avoid fishes with such a color pattern. So the striking coloration is simultaneously a warning to predators and a signal to conspecifics.

#### Little flashlights gleaming

It is also a reason why these "orange-spot mailed catfishes" are among the most popular aquarium fishes, as brightly-colored fishes are naturally attractive. The shoaling



species, with a total length of only around 5-6 cm, are eminently suitable for the standard aquarium sizes available in the trade, though the more solitary saddle-snouts are at least sometimes rather aggressive among themselves and hence need spacious aquaria, plus with a length of around 8 cm they are also significantly larger.

*Corydoras burgessi* is very variable in coloration; here a specimen with flank stripes.

Photo: H. J. Mayland





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### The water

The water in which these mailed catfishes live in the wild can be described as minimally contaminated, distilled water with an acid pH. It has a conductivity of 5-10  $\mu\text{S}/\text{cm}$  (corresponding to a total hardness of 0, ie not measurable using the usual hardness tests), and the pH lies between 4.5 and 5. The water temperature measured in the field is relatively high, as the habitats of these fishes can be visited only in the low-precipitation dry season. All the species come from the drainage of the upper Rio Negro. In the Rio Negro itself the water temperature is around 30 °C in the dry season, as the dark, coffee-colored water absorbs the sunlight. But it must be borne in mind that mailed catfishes usually live not in the main river, but in sometimes heavily shaded streams that also normally carry clear water with the color roughly of weak tea. And the water there is already cooler at around 25-28 °C. And during the rainy season, when, in addition to shade from the clouds, relatively cool rain water gushes from the sky, the water temperature can drop considerably even in larger tributaries.



*Corydoras adolfoi* with absolutely typical body form and coloration.

Photo: H. J. Mayland

From aquarium hobby experience we know that *Corydoras* species from the upper Rio Negro region not only tolerate rapid cooling of the water to around 16°C via a large water change (50% or more) designed to stimulate spawning, but in some cases actually require it in order to come into spawning mood. However, in such cases the cooling should be of only very temporary duration and the water gradually returned to around 24°C using a heater.

### In the aquarium

In captivity it isn't necessary to simulate such extreme water parameters as these fishes enjoy in the wild in order to keep these lovely mailed catfishes successfully. They are very adaptable and will also live for many years in hard, slightly alkaline water. But breeding will occur only if the natural water conditions are imitated to some degree. It must also be borne in mind that mailed catfishes follow a spawning rhythm that isn't readily comprehensible to the human observer. Sometimes they spawn almost daily, but then

C121 is characterized by its dark gill-cover. It frequently arrives in Germany mixed with importations of *C. duplicareus*.

Photo: F. Schäfer



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*Corydoras crypticus* is extremely similar to *C. burgessi* and differs from the latter only in the form of the head.

Photo: S. Nakano



*Corydoras burgessi* is a typical round-snout.

Photo: H. J. Mayland

stop for weeks on end. The gonads often atrophy in hard water, and individuals kept in hard water for a long time may take months to become capable of spawning again once they are transferred into soft, acid conditions.

Orange-spot mailed catfishes will be at their loveliest and liveliest if they are provided with water that is not only soft and acid, but also colored with humic substances. This can be achieved by the addition of Alder cones, for example. The bottom should be covered with fine white sand, with bogwood and dead leaves providing hiding-places. The dead leaves will also represent an important

Another color form of *Corydoras crypticus*.

Photo: H. J. Mayland



This lovely long-snout mailed catfish has been given the name C39.

Photo: F. Schäfer

supplement to the diet, as in the wild they are a major food source.

Because the majority of underwater plants won't grow under these conditions, they should either be omitted completely (saving a lot on electricity for the aquarium lighting) or floating plants used instead. The tank will look very attractive if water lilies (*Nymphaea*) can develop their floating leaves or swordplants (*Echinodorus*) are allowed to grow up out of the water. An air space 15-20 cm high will usually suffice for this. Both type of plants will then flower as well, providing the opportunity for lots of additional interesting observations.

#### The species

The orange-spot mailed catfishes include the following currently known species: *Corydoras adolfoi* Burgess, 1982, *C. burgessi* Axelrod, 1987, *C. crypticus* Sands, 1995, *C. duplicareus* Sands, 1995, *C. imitator* Nijssen & Isbrücker,

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1983, *C. nijsseni* Sands, 1989, and *C. serratus* Sands, 1995. In addition there is a species that is very similar to *C. imitator* but higher-backed, which has been given the provisional name C 39; and a species with a dark opercular spot, which in other respects resembles *C. burgessi* and is termed C 121. (The "C" stands for *Corydoras*). They are all shoaling species except for *C. serratus*.

Many of the fish species currently generally

*Corydoras imitator*, the long-snout analogue of *C. adolfoi*.

Photo: H. J. Mayland







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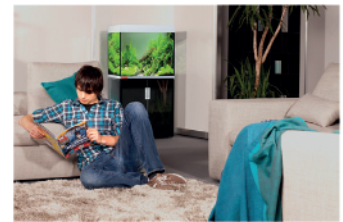
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*Corydoras adolfoi* from a recent import.

Photo: F. Schäfer



A color variant of C39 with a short dorsal band.

Photo: H. J. Mayland



included together in the genus *Corydoras* are not closely related to one another and in fact need to be assigned to different genera. Until this is achieved, the groups involved are

popularly known as round-snouts (or short-snouts), long-snouts, and saddle-snouts (the latter are the true *Corydoras*), and in addition there are a series of further special groups.

#### Round-snouts

The round-snouts *Corydoras adolfoi* and *C. duplicareus* are very similar to one another and, because both species produce numerous natural color variants, virtually impossible to

tell apart. But there is an anatomical difference: *C. duplicareus* possesses pectoral-fin spines that are heavily serrated on their inner edge, while those in *C. adolfoi* are smooth. However, this datum has never been scientifically tested since the original description of *C. duplicareus*.

The fishes generally labeled as *C. duplicareus* in the hobby are somewhat higher-backed and the dorsal stripe occupies about half of the caudal peduncle at the start of the caudal fin, while the individuals termed *C. adolfoi* are slimmer and the dorsal stripe runs in a fine line along the top of the caudal peduncle. However these differences cannot really be used in wild-caught specimens as these fishes are in fact rather variable and lots of intermediate and transitional forms can be found in the same importation. Only among tank-breds is there any uniformity, as the fishes then all look very similar.

Normally only *C. duplicareus* is bred, as this species has proved productive and easy to breed, while for reasons unknown *C. adolfoi* is regarded as difficult to breed. Because of the similarity between the two species no professional breeder is interested in a second, very similar, but at the same time less attractive (in the public view) species, and so *C. adolfoi* is usually available only as wild-caught.

*Corydoras duplicareus*, here a wild-caught specimen from a recent import - is the most popular of all the orange-spot mailed catfishes and the species most frequently seen in the trade.

Photo: F. Schäfer







*C. burgessi* and C 121 are also very similar, and in contrast to *C. adolfoi* and *C. duplicareus* have a black dorsal fin. The form of the dorsal band is highly variable; there are specimens with only a black saddle-spot, while others have a broad band the entire length of the back.

#### Long-snouts

The commonest long-snout in the trade is *Corydoras imitator*. The form of the head is very variable in wild-caught specimens, likewise the coloration. There are individuals with a broad or narrow dorsal stripe. *C. imitator* is the long-snout analogue of *C. adolfoi*, while the very similar, somewhat higher-backed C39 is the long-snout version of *C. duplicareus*. The long-snout for *C. burgessi* is *C. crypticus*, in which the long-snoutedness is often not particularly pronounced. *C. crypticus* is just as variable in color as *C. burgessi*.

#### Saddle-snouts

*Corydoras serratus* is the saddle-snout species among the orange-spot mailed catfishes. For many years only single specimens of this species were seen in Europe. Japan, where crazy prices (up to three figures for a single fish!) are paid for rare mailed catfishes, received practically all of these fishes. Because saddle-snouts live solitary, they cannot be collected effectively,



*Corydoras serratus* is the most variably colored species among the orange-spot mailed catfishes. All the individuals shown here originated from the same importation.  
Photos: F. Schäfer



This gorgeously colored species is broadly similar to *C. duplicareus*, but has a wider dorsal band that extends to the ventral side of the tail. Aquarium Glaser has already imported this fish, provisionally termed *C. sp. aff. duplicareus*, several times.  
Photo: F. Schäfer







Two more variants of the saddle-snout *C. serratus*.



This is the only photo that exists of a saddle-snout found as a bycatch among *C. nijsseni*. It may be a juvenile of the highly variable *C. serratus*, or perhaps another new species.

Photo: H.J. Mayland

unlike the shoaling species, which are so common that a single sweep of the net can secure hundreds or even thousands of specimens. But mailed catfishes have now gone out of fashion again in Japan, prices have dropped to an economically viable level, and enough *C. serratus* are reaching Germany for the variability of the species to be studied. And it is enormous! Laymen would quite simply think they were different species, but the variability in coloration is genetically determined. We now know of tank-bred broods where all the different variants occur among the young of identically colored parents.

#### The elegans group

There is a fourth type of orange-spot mailed catfish that belongs to the close relatives of *C. elegans*, namely *C. nijsseni*. These species are often found in the open water instead of on the bottom, and the males and females have completely different coloration. In addition *C. nijsseni* too exhibits high variability in coloration in the wild. It is not known whether these differences are simply intraspecific variation or represent geographical variants. Unfortunately *C. nijsseni* is not currently being imported, so that this question can't be answered at present.

Why not go on a journey of discovery around your local aquarium stores? One or another species will undoubtedly be available there wild-caught, and maybe you will be lucky and even discover a bycatch among them!

## Lexicon

### Mailed catfishes

**Corydoras**: from the Ancient Greek, meaning "with helmet and lance", referring to the external bony armor and the stout fin spines.

**adolfoi**: named in honor of Adolfo Schwartz, a Brazilian ornamental fish collector and exporter.

**burgessi**: named in honor of ichthyologist and book author Warren E. Burgess, who described *Corydoras adolfoi* among others.

**crypticus** means "hidden", as the species disguises itself as another.

**uplicareus** means "duplicate", as it looks (almost) identical with the species *C. adolfoi*.

**imitator** means "one who imitates", because the species imitates *C. adolfoi* in color.

**nijsseni**: named in honor of the Dutch ichthyologist Han Nijssen, who has worked extensively on mailed catfishes.

**serratus** means "serrated" or "saw-toothed", referring to the heavy serration of the pectoral-fin spine.

**Brochis** means "loop" or "noose", referring to an anatomical structure in the head region.

**Aspidoras** means "Doras with a shield"; *Doras* is another catfish genus.

**Scleromystax** means "hard moustache".

#### Literatur

Evers, H.-G. (2002): Die Panzerwelse des oberen Rio Negro Einzugs, *Aquaristik Fachmagazin* 167, 34 (5): 4-9



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## Lizards

# Cool at night - two-horned chameleons

by Thorsten Holtmann

The Usambara Mountains in north-eastern Tanzania are among the oldest mountains on Earth. They came into existence more than 600 million years ago. They are cloaked in cool, extremely species-rich rainforest - sometimes termed a "hotspot of biodiversity". Many interesting creatures reach Europe from this region.



Böhme's Two-Horned Chameleon, a relatively small species that attains around 19 cm in length including the long tail.

All photos: Frank Schäfer

These animals include the two-horned chameleons (*Kinyongia* spp.), a fascinating group of egg-laying chameleons. A number are imported more or less regularly, while others are available captive-bred.

## Natural distribution

The Usambara Mountains represent only a part of the distribution region of the two-horned chameleons. They live the length of the remains of the roughly 30 million years old montane forests of the so-called Eastern Arc, which lies in the border zone between Kenya and Tanzania and includes the Chyulu Hills, Kilimanjaro, Mount Meru, the Taita Hills, North Pare, South Pare, the West and East Usambara

Mountains, Nguu, Nguru, and Uluguru - to name only those best known here in Europe.

Unfortunately even the remains of the former jungle are seriously threatened. The start of the massive felling was the work of, inter alia, the Germans who once held a colony in what is now Tanzania. Because the climate in the Usambara Mountains is very pleasant (by day it is no warmer than 30 °C year-round, while at night the temperature drops to a comfortable 15-17 °C) and there is no malaria there, the area was a favorite place for colonial settlement. This began in the late 1880s, and the first descriptions of two-horned chameleons date from that time.

## Problematical systematics

All chameleons were formerly placed in the genus *Chamaeleo*. The two-horned chameleons were later transferred to the genus *Bradypodion*. Then just a few years ago, specifically in 2006 (Tilbury et al.), a separate genus *Kinyongia* was erected for the egg-laying chameleons of East Africa. The two-horned chameleons were also assigned to this genus, but because the fine details of the systematics were unclear they were as a rule referred to as the *Kinyongia fischeri* complex. Shortly thereafter it proved possible, largely on the basis of molecular data, to throw some light on the nomenclatural muddle of the







*Kinyongia boehmei* is regularly available captive-bred in the hobby.

species (Mariaux et al., 2009). Additional species descriptions followed as a result of this important work, and today a total of 18 species are placed in the genus *Kinyongia*, five of them not discovered and scientifically described until the current millennium. But in the hobby many if the individuals imported continue to be sold as *K. fischeri*, even though

pathogens (internal parasites), plus chameleons have a high drinking water requirement that must be provided every day, and they aren't always problem-free when it

comes to feeding, as they prefer a varied diet. In addition, when keeping chameleons it is a lot more important to provide the very different, species-specific requirements as

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that species is hardly ever actually seen in the trade. The majority of the "*K. fischeri*" imported probably belong to the species *K. multituberculata* and *K. matschiei*. By contrast the names are usually guaranteed among captive-bred stocks, as in the case of *K. boehmei*, for example, photos of which illustrate the first two pages of this article.

### Not easy-peasy, but equally not impossible

For a wide variety of reasons chameleon maintenance is not for the beginner, except in the case of the species *Chamaeleo calypttratus*, which has become a domestic pet.

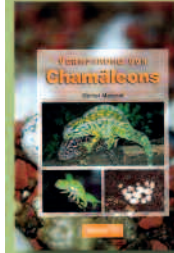
These animals are naturally relatively short-lived. Wild-caught specimens need to be regularly treated against all sorts of



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regards microclimate than it is with the majority of other lizards. In the case of two-horned chameleons the main such requirement is a hefty night-time drop in temperature to 15-18 °C. By day the temperature can be 25-28 °C. Anyone who can't guarantee this nocturnal drop in temperature should steer clear of two-horned chameleons, attractive though they may be.

Because space doesn't permit extensive discussion of their other maintenance requirements here, the reader is referred to the specialist literature; fortunately this is adequate and indispensable to the



The way the eyes operate independently of one another never ceases to fascinate.



*Kinyonga multituberculata* is usually sold as *K. fischeri*. The species can be readily recognized by the dorsal crest, which extends as far as the tail. Length up to around 35 cm. Male above, female below.



#### Literatur

Mariaux, J., Lutzmann, N. & J. Stipala (2008): The two-horned chamaeleons of East Africa. *Zoological Journal of the Linnean Society* 152: 367–391.  
 Tilbury, C. R., Tolley, K. A. & W. R. Branch (2006): A review of the systematics of the genus *Bradypodion* (Sauria: Chamaeleonidae), with the description of two new genera. *Zootaxa* 1363: 23–38

## Lexicon

### Chameleons

**Bradypodion** means "slow-foot".

**Chamaeleo** means "ground lion".

**Kinyongia**: from the name for chameleons in Swahili.

**boehmei**: named in honor of the herpetologist Wolfgang Böhme (1944 - ).

**fischeri**: named in honor of the herpetologist Johann Gustav Fischer (1819-1889).

**matschiei**: named in honor of the zoologist Georg Friedrich Paul Matschie (1861-1926).

**multituberculata** means "with lots of nodules".

conscientious owner of these fabulous creatures. For breeding see our book tip, for general maintenance, etc we recommend Necas, P. (2010): *Chamaeleons - Bunte Juwelen der Natur*. Edition Chimaira, Frankfurt, 366 pp., for example.

#### Usambara Violets and chameleons

We would just like to add that fortunately the

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outlook seems relatively good for many species of two-horned chameleons. Despite the great age of their habitat, some species at least are able to adapt very well to human civilization. This is also the reason why some species are regularly available in the trade. A terrarium with a two-horned chameleon (they are usually kept singly), a number of interwoven branches, and some Usambara Violets (*Saintpaulia*), will bring all the magic of ancient Africa into the living-room.

If you are now filled with the desire to keep two-horned chameleons, your pet dealer can undoubtedly order them for you from a trustworthy wholesaler, for example Tropenparadies in Oberhausen, Fax +49 0208-665997





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## ► AQUASCAPES

Aktuell und populär: Nicht immer kann sich die Aquaristik mit diesen Attributen schmücken, aber Aquascaping findet seinen Platz auch in Fernsehen und Radio. Das Schöne ist: Jeder kann es lernen! Im Zoohandel finden Sie wunderbare Pflanzen und Becken.

Die Wortschöpfung setzt sich aus Aqua = Wasser und (Land)scape = Landschaft zusammen. Aquascaping bedeutet somit das Gestalten entweder naturgetreuer Landschaften oder auch reiner Fantasiewelten unter Wasser. Dieser Trend der Aquariengestaltung wurde von Takashi Amano begründet. Seine wunderbar ästhetisch gestalteten Schauaquarien, deren Gestaltungselemente der japanischen Gartenkunst entspringen, wurden zahllosen Aquascapern zum Vorbild für eigene Ideen.

Die Landschaft kann eine Unter- oder Überwasserlandschaft sein, ein beliebiger Ausschnitt einer Gegend irgendwo auf der Erde, oder ein Bild in der eigenen Phantasie. Man könnte einen breiten Flusslauf mit großen runden Steinen bauen oder den Uferbereich eines schilfbewachsenen Sees nachbilden. Jede Landschaft kann im Kleinen dargestellt werden, ein Wald, eine mit niedrigen, grasartigen Pflanzen bewachsene Wiese, eine Felsformation im Gebirge. Besonders faszinierend für den Betrachter ist es, wenn die Elemente gekonnt vermischt sind und eine nachgebildete Küstenlandschaft so wirkt, als würde sie im Hintergrund in Meer und Horizont übergehen. Dann ist die Sinnestäuschung perfekt. Besuchen Sie eine der vielen Veranstaltungen, auf denen die besten Scapes prämiert werden – es lohnt sich!



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Wolfgang Dengler. 2013. 128 S.,  
126 Farbfotos, 12 Zeichnungen, geb.  
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## Silly Season Stories, Part 1

# Pacus bite the balls off naked male bathers

by Frank Schäfer

On 10th August 2013 an article appeared in the online edition of the British daily newspaper The Telegraph under the headline, "Swedish men must watch out for testicle-chomping fishes". The background to the sensational, fabricated story was that a fisherman had allegedly caught a pacu in the Öresund!



Two albino specimens of the Red Pacu, *Piaractus brachipomus*

All photos: Frank Schäfer

In this article the reader learned that pacus (scientific names were, as usual, not mentioned) are very common in the Amazon and Orinoco region and that they have also been introduced elsewhere in the world, eg in Papua New Guinea. Where fishermen have repeatedly bled to death after pacus have bitten off their testicles.

The pacu was demonized with headlines such as this.

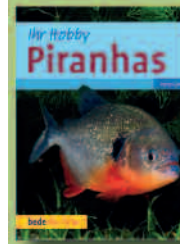


## Absolute nonsense!

Obviously there isn't a shred of truth in all this. Pacus don't bite off men's testicles. They are wild creatures, wary of humans, and no attacks by pacus on humans have been documented. Our researches show that the sensationalist report was first printed on 9th August by the paper The Local. But this article was written with an element of irony and quoted ichthyologist Henrik Carl of the Danish Natural History Museum as saying that you are more likely to drown (while bathing in the Öresund) than to have your nuts bitten off by a pacu. The story in the Telegraph on 10th August was more bloodthirsty, while on 11th August the science column (!!!!) of the Australian International Business Times focused more on the naked backsides of bathing humans... Even the supposedly serious Spiegel online reported the nonsense on 13th August.

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All these articles (and there are undoubtedly more, though we haven't checked) state that DNA tests have been performed in order to establish the identity of the 21 cm long pacu, as without DNA tests the species cannot be distinguished from the very similar and closely related piranhas.

The fact is, neither a pacu nor a piranha could survive for more than a few minutes in the Öresund. Because both species are

*Myleus pacu*, the pictures originate from the original description of 1841 - has given its name to the entire group. Male above, female below.







Red Pacus are sociable fishes and completely peaceful towards humans.

tropical freshwater fishes that would rapidly expire in the sea water of the Öresund because of the salt content, assuming they hadn't already died of cold in water far too chilly for them. Neither a pacu nor a piranha would be thinking about feeding under such conditions!

#### Could anything be more stupid?

Anyone who thinks that all this plumbs the depths of gutter journalism is sadly mistaken. Although the article mentioned below can only be an extremely good piece of humor, it was taken seriously and probably formed the basis of the "Pacu in the Öresund" nonsense. On the web page [http:// christwire.org/2012/07/lesbian-atheists-invent-pacu-release-testicle-eating-fish-in-lake-yeager-illinois/](http://christwire.org/2012/07/lesbian-atheists-invent-pacu-release-testicle-eating-fish-in-lake-yeager-illinois/) you will find the following very funny article: "Lesbian Atheists Invent Pacu, Release Testicle Eating Fish In Lake Yeager Illinois". The article appeared in the July of the previous year. Because this sort of thing can (quite correctly) be produced only under the influence of illegal drugs, here is the opening paragraph: "The men of Illinois should be very afraid. A militant group of lesbian atheists have used genetics to create a breed of fish called the Pacu. The name of the fish is an anagram that stands for Penis Amputating Castrations Underwater. The

pacu fish is actually a specialized genetic weapon.." In the text that follows we learn that the women spliced their man-hating genes into the fish and that there are only female pacus that reproduce via oogenesis - a perfect weapon against both men and the will of God. In addition the lesbian atheists made the fish genetically resistant to salt and chlorine, so that their new weapon could be introduced into both fresh and sea water: and the man-eating pacus can even survive in heavily chlorinated swimming

Black Pacu, *Colossoma macropomum*

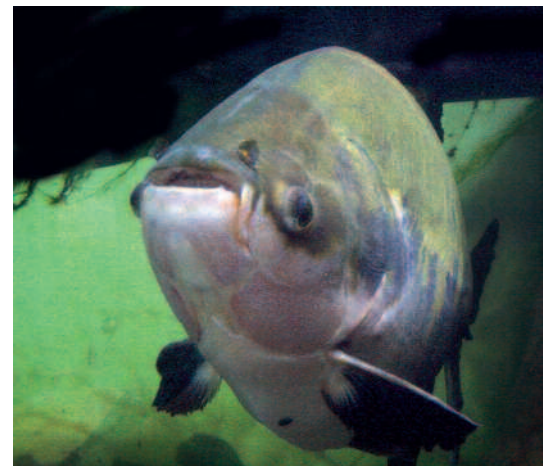


pools where any other fish would die immediately!

The whole is so over-the-top that nobody in their right mind could possibly believe there was a grain of truth. And there is a clear clue to this in the headline, "Lesbian Atheists Invent Pacu ...". The English word "invent" refers not only to creating tangible objects but also to making up stories.

#### The truth about pacus

The popular name pacu originates from the Tupi indian language and is used for the herbivorous relatives of the flesh-eating piranhas in general. "The Pacu" in the narrowest sense is the species *Myletes pacu* Jardine in Schomburgk, 1841 (= *Myleus pacu*), but members of the genera







Portrait of the Orinoco Piranha, *Pygocentrus cariba*, one of the very few relatively dangerous piranha species.



Portrait of a Red Pacu. Doesn't it look jolly?

*Colossoma* and *Piaractus* are also known worldwide as pacus. But in Brazil, for example, the term is used much more widely and the species of the genera *Mylossoma*, *Myleus*, *Mylesinus*, and *Metynnias* are also called pacus, making a total of around 30 different fish species to which the name is applied.

The pacus with the greatest economic importance are the species *Colossoma macropomum*, also known as the Black Pacu, and *Piaractus brachipoma*, popularly termed the Red Pacu. The former species

is now bred as a food fish not only in its South American homeland (originally there were Black Pacus in Bolivia, Brazil, Colombia, Peru, and Venezuela) but also in South-East Asia. The record size for a Black Pacu is just over a meter long (normally 40-60 cm) and it can then weigh up to 30 kilograms. This makes the Black Pacu one of the largest of all characins. The Red Pacu remains only slightly smaller. The flesh of both species is a delicacy, and as a result they are over-fished in large parts of their distribution regions and natural populations are decreasing worryingly.



This is also a bad thing because both pacus are specialized fruit-eaters, seasonally at least. The seeds of trees are excreted undigested and hence these large pacus play a very important role in the reproduction of many jungle trees.

All the live pacus seen in the trade are captive-bred specimens. Juvenile Black and Red Pacus look extremely similar to the most dangerous of all piranhas, the Red Piranhas *Pygocentrus nattereri* and *P. cariba*. The resemblance is so perfect that we must assume that juvenile pacus obtain a benefit of some kind from imitating the piranhas. However, it has to be said that even Red Piranhas do not represent a significant danger, to humans at least. Although Black and Red Pacus have an enormously powerful bite that can even crack nuts, a pacu never represents a threat to humans in the wild, though unfortunately the reverse cannot be said to be true. And a pacu caught with rod and line cannot be blamed for biting anything in the vicinity.

Juvenile Black Pacu.





### Pacus in the aquarium?

These pacus grow too large for normal living-room aquaria. They are, however, splendid specimen fishes for public aquaria, where they can easily live to more than 20 years old. Because they are bred as food fishes and are attractively colored when young, they are occasionally sold in the pet trade as "vegetarian piranhas". But they grow on very quickly and sometimes their owners don't have the stomach to kill them quickly and painlessly and eat them, but release them into the wild. In the vast majority of cases - for example in central and northern Europe - that means a slow and painful death for the fishes. In the tropics, however, pacus can do serious damage in foreign ecosystems that were never designed to accommodate them. So under no circumstances should fishes that have grown too large ever be released, that goes against all the principles of protection of animals. And zoos have no use for such fishes except to use them and food, and in that case you might as well eat them yourself - as previously stated, they taste good!

### Pacus are wild animals, not monsters!

Just as mindless sentimentality about fishes that have grown to large is misplaced, in the same way the demonization of a wild fish species as a "testicle chomper" is a dreadful slander. Not only do these silly-season reports (in this issue of the News there is a



Juvenile *Pygocentrus nattereri*. Only the piranhas of the genus *Pygocentrus* are potentially dangerous to humans because of their hunting behavior, and even so mishaps with them are extremely rare and in all likelihood nobody has ever been killed by them.



Juvenile Red Pacus look rather similar to piranhas.

A splendid red Pacu.



further piece of summer lunacy about a snapper turtle attacking humans) and numerous other stories about wild animals in the media give the impression of having been served up by a bunch of drunken armchair fishermen instead of researched by serious journalists, but unfortunately many readers take this sort of crap seriously! The fact is that no wild creature attacks humans unnecessarily or out of malice. Man is the only animal species on this planet that kills and mutilates without reason and to excess. And when we read hair-raising stories such as this one about testicle-chomping pacus in the supposedly





Piranhas and pacus live here in the Rio Moa, but humans bathe there with impunity. The fishes are harmless.

serious media, then we cannot escape the feeling that some people at least are fundamentally stupid.

Note that even though pacus can survive for a short time in gravel pits during warm summers in Europe, there is no need to worry about these fishes launching attacks on bathing humans. Pacus avoid people and never go near them. And regardless of that the sensationalist press would have you believe, testicles are quite close by a man!

#### Internet sources cited:

<http://christwire.org/2012/07/lesbian-atheists-invent-pacu-release-testicle-eating-fish-in-lake-yeager-illinois/>

<http://au.ibtimes.com/articles/498230/20130811/warning-swedish-men-don-t-swim-nude.htm>

<http://www.spiegel.de/wissenschaft/natur/bissiger-fisch-forscher-raten-zu-vorsicht-beim-baden-im-oeresund-a-916301.html>

<http://www.telegraph.co.uk/news/worldnews/europe/sweden/10234986/Swedish-men-told-to-beware-testicle-munching-fish.html>

<http://www.thelocal.se/49558/20130809/>

It isn't the pacu that is dangerous to humans, but humans to the pacu. This is a *Colossoma macropomum*, ready for eating.





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## ► Probleme mit Algenwuchs ?

Alle Aquarianer kennen das. Das Aquarium ist eingerichtet, Pflanzen und Fische entwickeln sich prächtig, doch dann: zunächst zaghaft, oft aber explosionsartig entwickeln sich Algen und überwuchern die gesamte Dekoration. Das Aquarium macht einen ungepflegten Eindruck.

Jetzt ist guter Rat teuer. Im Handel werden Algenvernichtungsmittel angeboten, doch es handelt sich fast ausnahmslos um sogenannte Biozide, Produkte, die giftige Substanzen enthalten. Solche Produkte dürfen in Aquarien mit Wirbellosen (Garnelen) generell nicht eingesetzt werden. Natürlich machen diese Substanzen auch keinen Unterschied zwischen Fischen und Pflanzen und den unerwünschten Algen.

Was also tun, wenn man auf solche Mittel generell verzichten möchte? Zunächst einmal ist es wichtig, die Ursachen für die Algenplage zu beseitigen. Sparsam füttern, Beleuchtungszeit reduzieren, alte Leuchtstoffröhren austauschen. Wichtig ist das Ausfiltern von überschüssigen Nährstoffen aus dem Wasser, vor allem Phosphat und Nitrat. Der Phosphatwert sollte nicht über 0,5mg/l, der Nitratwert nicht über 50mg/l steigen. **amtra** bietet seit Jahren ein Kombiprodukt an, dass überschüssiges organisches Material bindet: **algencontrol**, es wird im Filtersäckchen geliefert, das einfach in die letzte Kammer des Filters eingelegt wird. Um die Algen im Aquarium schonend zu reduzieren, bietet **amtra** ebenfalls eine interessante Alternative zu Bioziden an: **algenkur**, hierbei handelt es sich um ein huminstoffreiches Pflegepräparat, dass den Spektraleinfall des einfallenden Lichtes verändert.

Die Algen können das Licht nicht mehr nutzen und entwickeln sich zurück.

**amtra** ist seit 25 Jahren ein Geheimtipp für Aquarienpflege nach natürlichem Vorbild. Die Produktpalette für schonende Algenbekämpfung wurde jetzt überarbeitet.







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## Silly Season Stories, Part 2

# Snapper turtle seriously injures swimming boy

by Christoph Fritz, [www.reptilia24.com](http://www.reptilia24.com)

It happened in the hot summer of 2013. On Monday 5th August an eight-year-old boy received a serious foot injury, in which the Achilles tendon was severed twice, while bathing in the Oggenrieder Pool near Irsee (Ostallgäu district). Despite the total improbability of this being the case, a snapper turtle was supposed to have caused this injury .



Common Snapper Turtle, *Chelydra serpentina*.

All photos: Frank Schäfer

Nobody actually saw the ill-omened turtle, not even the injured boy. According to the press (the newspaper "Kreislote" of 11/8) the suggestion that the injury was a bite from a snapper turtle came from the doctor treating it and from unnamed experts from the Zoological Institute in Munich. However, it remains unclear how the bite of a snapper turtle can be identified, as the fact is that there isn't a single documented case anywhere

in the world of a snapper turtle inflicting such a serious injury on a human, so quite simply there are no data available for comparison. But the turtle was given a name: Lotti. And with that a PR machine swung into motion!

## Worldwide attention

Anything with a name gets into the press. On 12th August BBC Europe and the

Canadian CBC reported the case online, and Lotti and Irsee appeared in the papers all over Germany. Nobody expects scientific accuracy in the daily press, but it seems that not a single editor actually thought of questioning this nonsense. Instead the whole thing was blown up out of all proportion and an essentially harmless turtle, in practice far less dangerous to human heels than a dachshund, was transmuted into an up to





Where's Wally? There are three adult snapper turtles in this aquatic pen in a zoo in southern France. Can you find them?



This is the solving of the riddle: the white outlines show the positions of three large snappers.

100 kg monster, whose release in the most popular recreational area in the region by a lawless and unscrupulous pet owner triggered an orgy of incomprehension and head-shaking among the poor, oppressed bathing fraternity.

#### What are snapper turtles?

There are four species of snapper turtle: the Common Snapper Turtle *Chelydra serpentina*, which lives in Canada,

practically all of the USA, and parts of Mexico; the very similar, Central and South American *C. acutirostris*; the exclusively Central American *C. rossignonii*; and finally the Alligator Snapper Turtle *Macrochelys temminckii*, which lives in the Mississippi basin in the USA.

Although these turtles thus occupy a vast natural distribution region, there isn't a single authenticated report of one of them making an unprovoked attack on a

bather. And yet a turtle released in Germany supposedly behaved so atypically for the species? Probably not...

#### Was it a snapper turtle?

Snapper turtles can in fact be immediately eliminated as the perpetrators of the injury illustrated. But let us first take a look at the Alligator Snapper Turtle, the most likely candidate on the basis of size and biting power. It is a lurking hunter, the tip of whose tongue is modified into a worm-like appendage. This turtle lies in the water with its mouth open and uses its tongue to attract the fishes on which it feeds. The Alligator Snapper Turtle, with a length of up to 90 cm and a weight of 80 kg may be the largest freshwater turtle on

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Earth, but were it to bite (which it would do solely in self-defense) then there would be a ring of bite marks in the form of grooves or cuts all round the ankle of the child. It couldn't bite off a foot. Because of its mouth structure no snapper turtle, and hence no Alligator Snapper Turtle, could even bite a piece out of an Achilles tendon.

It couldn't have been the two Central and South American species for the simple reason that they are zoological rarities and virtually never maintained in captivity. That leaves the North American Common Snapper Turtle, *Chelydra serpentina*. It may well be kept all over the world, except in Germany, where the Nanny State is so concerned about the danger to the public represented by wild monsters that in 1999 the maintenance and breeding of all snapper turtles was banned as a precautionary measure.

It is conceivable that someone or other bought a baby snapper turtle somewhere



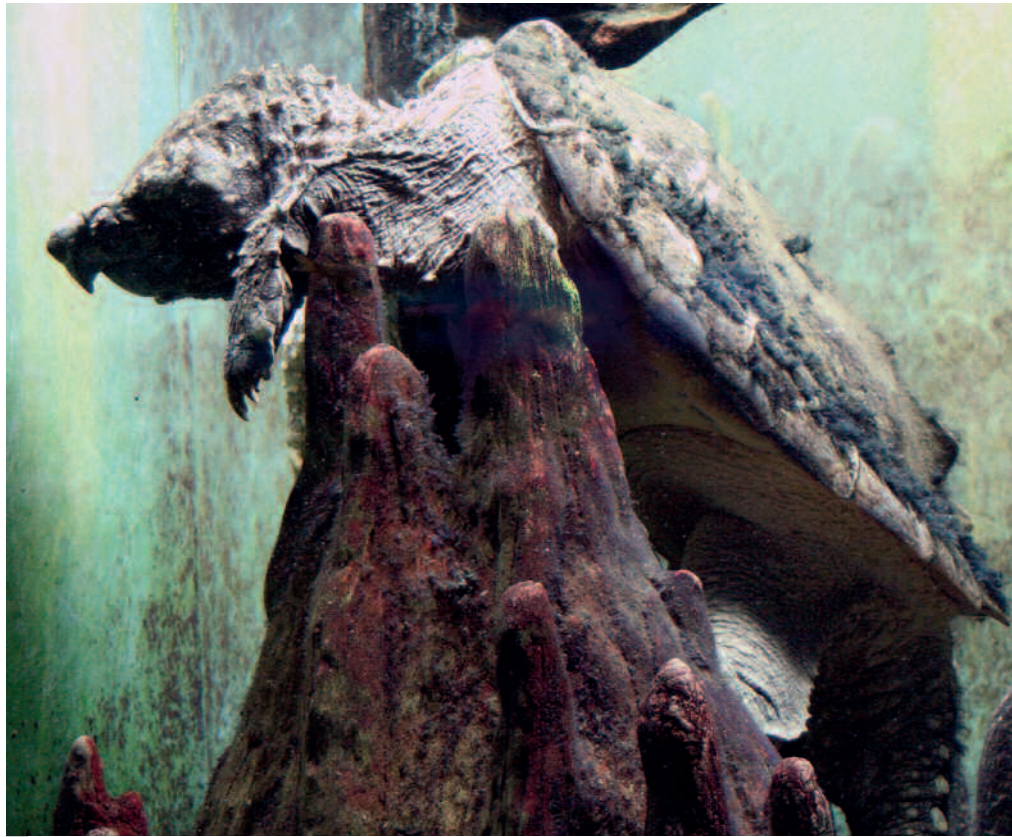
else in Europe, and that this person got rid of it by releasing it when it eventually grew too large - it couldn't be sold or given to a zoo as maintenance is illegal, so that would be to fall on their own sword. Unfortunately released snapper turtles are discovered now and again, albeit practically exclusively by anglers, as Common Snapper Turtles aren't fussy about what they eat and will also go after fishing bait. But even if Lotti exists and even if Lotti is a Common Snapper Turtle, then there is no way that she would have bitten through an Achilles tendon! Because a scientifically proven fact demonstrates otherwise: once a Common Snapper Turtle has sunk its teeth into an attacker it doesn't let go again - as evidenced by the case of a lady pet-owner in the USA (when turtles attack). In that case a snapper turtle weighing around 12-14 kg, which had sunk its teeth into the cheek of a 16-year-old youth, caused such minimal skin damage that first aid treatment was sufficient.

#### Facts about Common Snapper Turtles

Females of the species grow to 24-36 cm long, while males are slightly smaller at 24 to 39 cm. The largest Common Snapper Turtle known to date was 47 cm long. These turtles usually weigh 15-20 kg, with the record being 31 kg. They can live to be more than 75 years old if allowed to, but average life-span is around 30 years. No human has ever died at the hands of a Common Snapper Turtle, but every year innumerable individuals are killed by humans purely for pleasure or for food. Common Snapper Turtles reproduce via eggs, which are laid in a pit on land. Around 10-30 eggs are produced per clutch, with the young hatching after 9-18 weeks, when they measure four to five centimeters in length. Despite persecution by humans, the adaptability of snapper turtles means their populations aren't threatened.

#### Not wicked

The total ban on the maintenance of



The Alligator Snapper Turtle, *Macrochelys temminckii*, is the largest of all the freshwater turtle species.

snapper turtles in Germany has repeatedly been justified by the danger they supposedly represent. There can be no doubt that larger specimens can inflict bite damage (comparable to dog bites) on humans. The severing of a finger cannot be ruled out. But such injuries are exclusively the result of careless handling. A snapper turtle will never under any circumstances attack a human without provocation.

The handling of large snapper turtles does, of course, need to take place. A sturdy net with as fine a mesh as possible is the best tool for moving Common Snapper Turtles. Simply make sure that the head of the turtle is pointing away from the body of the handler, as that way nothing can go wrong. Very large Common Snapper Turtles can't be handled by one person alone, but such massive specimens are very expensive and valuable. People who own them require no advice from us.

Snapper turtles are usually peaceful among themselves and towards other turtles. Their maintenance presents

relatively few problems overall, but is, as already mentioned, banned in Germany.



#### Lotti - just a PR stunt?

The good news is that the boy is now doing fine. Whatever actually caused his injury (probably a piece of glass or wire), it certainly wasn't Lotti. The pool was drained and no Lotti was found. The fishes from the pool were relocated, as Germans are animal lovers. Lotti is periodically to be found in the press even now, and because a reward of 1000 € was offered for her capture, the pool attracts regular visitors hoping to perhaps at least catch a glimpse of the mysterious Lotti. The homes of local owners of exotic animals, the primary suspects in the matter, were searched, admittedly without anything being found,





Because of its mouth structure it is impossible for an Alligator Snapping Turtle to bite through the Achilles tendon of a human. So Lotti can't have been an Alligator Snapper Turtle.

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but hopefully the search acted as a warning never to even think of keeping such a ghastly monster. But given the well-known fact that officials are virtually never experts in the field in question, one has to ask - who, in heaven's name advised them? There are still a host of people living in Germany who kept snapper turtles privately prior to 1999 and could have provided the officials with sensible, on-the-spot advice. In addition there are competent pet-owner clubs such as the DGHT (Deutsche Gesellschaft für Herpetologie und Terrarienkunde/German Association of Herpetologists and Terrarium Keepers )

and zoological gardens who are familiar with snapper turtles. But instead it seems that yet again it was exclusively inhabitants of Stupidity City who were consulted on what to do about Lotti. Or was Lotti perhaps no more than a damnably clever PR stunt?

Sources for Lotti:

[http://www.kreisbote.de/news/panorama/  
alligator-schildkroete-treibt-weiter-  
unwesen-zr-3052125.html](http://www.kreisbote.de/news/panorama/alligator-schildkroete-treibt-weiter-unwesen-zr-3052125.html)

[http://www.bbc.co.uk/news/world-  
europe-23664554](http://www.bbc.co.uk/news/world-europe-23664554)

[http://www.cbc.ca/news/world/germans-  
hunt-snapping-turtle-after-reported-  
attack-on-boy-1.1330393](http://www.cbc.ca/news/world/germans-hunt-snapping-turtle-after-reported-attack-on-boy-1.1330393)

Sources for scientifically authenticated biting by snapper turtles:  
[http://www.epmonthly.com/clinical-  
skills/visual-dx/when-turtles-attack](http://www.epmonthly.com/clinical-skills/visual-dx/when-turtles-attack)

[http://www.epmonthly.com/clinical-  
skills/visual-dx/when-turtles-attack-part-ii](http://www.epmonthly.com/clinical-skills/visual-dx/when-turtles-attack-part-ii)

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## L-number catfishes

# A new large cactus catfish

by Wolfgang Löll

The popular name of cactus catfishes for the genus *Pseudacanthicus* is very apt. The entire body, the fin-rays, and the interoperculum are covered with needle-sharp spines, so-called odontodes. Two species of cactus catfishes, L24 and L25, which both grow to around 40 cm long, are much prized by owners of large aquaria because of their splendid coloration. Aquarium Glaser has now imported for the first time a cactus catfish that resembles L24 in coloration but must actually be an L25 on the basis of its distribution region - a minor sensation on the scene!



The new L25b *Pseudacanthicus* sp. New Itacaiúna.

All photos: Frank Schäfer

First of all we would like to remind you about the significance of L-numbers. At the end of the 1980s the aquarium hobby began to discover the wonderful diversity of the loricariid catfishes. These armored catfishes had in fact been known since the beginning of the aquarium hobby, with, for example, the first importations of *Ancistrus* species (bristle-nose catfishes), *Hypostomus* (suckermouth catfishes), and *Rineloricaria* species (whiptail catfishes) taking place as long ago as the beginning of the 20th century. But because of their not particularly attractive coloration these fishes were regarded more as something for specialists with a liking for oddities. Not

until the 1950s to 1960s did a number of species achieve popularity as algae-eaters.

Today, with around 870 species known, divided between more than 100 genera, the loricariid catfishes are the most species-rich of all the catfish families.

### The birth of L-numbers

The increase in interest in armored catfishes led to more frequent imports and more and more new species. Because of the unavailability of scientific literature on these fishes, which in addition were known only from faded museum specimens, only a halfway accurate identification of the imports proved possible. And so it came

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Portrait of L25b *Pseudacanthicus* sp. New Itacaiúna.



Dorsal view of another specimen of L25b *Pseudacanthicus* sp. New Itacaiúna.

For comparison: L25 from the vicinity of Altamira on the Rio Xingu.



about that importer Arthur Werner in Munich, Rainer Stawikowski, the Editor in Chief of the Magazine DATZ, and fish-enthusiast and biologist Uli Schliewen (now head ichthyologist at the Zoologische Staatssammlung in Munich), had the bright idea of simply photographing newly imported loricariids or newly discovered forms in the field, numbering them in order of appearance, and publishing photo together with number in DATZ, so that aquarists would have a unique identifier for each of these fishes even in the absence of a scientific name. The idea immediately caught on in the hobby, and the trade happily went along with it. The "L" stands simply for the

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scientific name of the armored catfish family, the Loricariidae. So far 464 armored catfishes have received an L-number. That doesn't necessarily mean that there are also 464 different species, but they do represent different populations or fishes of different appearance. In the meantime some of them have also been identified scientifically, but to the present day the majority cannot be identified with certainty or are definitely still unknown to science. The latter group includes L24 and L25, which were first portrayed in DATZ in 1989.

### Scarlets

Because of their splendid red finnage L24 and L25 rapidly received a popular name as well - Scarlets - although in this particular case only large specimens are beautiful fishes. Juveniles of L24 and L25 are rather unremarkable and typical "ugly ducklings". So you need to be aware of what they will develop into if you are going to buy them. The reverse is the case in the majority of loricariid species, where it is the juveniles that have attractive contrast-rich coloration, while adults tend to exhibit pleasing shades of brown and black. But large fishes are expensive fishes,



as they require a lot of space and water during transportation. And the fishes themselves already command a high price in Brazil, where they come from. For this reason very large numbers of Scarlets are never seen in the trade, as there is, by the nature of things, only a limited market for large and expensive fishes. The result is that aquarists are correspondingly more passionate about Scarlets if they have the opportunity to keep them.

L24 and L25 differ in terms of their provenance and with regard to their coloration. L24 comes from the rivers Tocantins and Araguaia and has an unpatterned head and usually unpatterned fins as well. L25 comes from the Rio Xingu and has bold dark dots on the head and



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usually also on the fins. But both species are highly variable in coloration: L24 may or may not have dots on the body, and the red color on the fins can vary considerably even within a population. L25 has a more flattened and more contrast-rich form from the upper course of the Xingu at Sao Felix and a higher-backed form from the lower course. But these are only general



*Pseudacanthicus* sp. L24 from the Rio Tocantins

guidelines, as the body shape can also be rather variable in these fishes. We mustn't forget that they are usually sold as wild-caught adults. Food is often in short supply in the wild, and the fishes may be plump or slender depending on the nutritional situation during the course of the life of the individual.

As well as being unique representatives of the genus *Pseudacanthicus*, the Scarlets also have a silver-colored iris. This sometimes makes it less than a pleasure to photograph them as the flash is strongly reflected by the iris, and simultaneously the pupil reacts instinctively to the bright

light by contracting. As a result Scarlets in photos often look as if they have a cloudy eye. But that is hardly ever the case.

**A new L25 with the coloration of an L24**  
Aquarium Glaser has now for the first time imported cactus catfishes from this group from the upper course of the Rio Itacaiúna. The source region of this river is the same as that of the Rio Frisco, which is an affluent of the Rio Xingu. Moreover the Rio Itacaiúna and the Rio Frisco are linked via a flooded savanna area during the rainy season. So one might actually expect there to be L25 in the Rio Itacaiúna and hence they are provisionally labeled as such on the stock list: L25b *Pseudacanthicus* sp. New Itacaiúna. However, these lovely fishes are more similar to L24 in their coloration. DNA samples have already been sent to a scientific institute in Brazil. It is quite possible that L24 and L25 are simply color forms or subspecies of the same species; after all, at least four variants of L24 are already known from the Tocantins and the Araguaia, and, as already detailed above, there are at least two variants of L25 in the Xingu.

#### Scarlets in the aquarium

Except for the impressive size these fishes can attain, they are comparatively easy to keep, with no special requirements as regards either water chemistry or food.

L24, population from the upper Rio Tocantins; male above, female below.







This is a German-bred juvenile L25.

However, a really large filter is a prerequisite for successful maintenance, as these large fishes eat a lot, and anyone who eats a lot also sh....., oops, produces a lot of excreta. *Pseudacanthicus* species are carnivores that accept mainly frozen or manufactured foods, with vegetable fare being largely ignored, although if they are kept in the company of large herbivorous species they can sometimes be seen to nibble at cucumber, zucchini, and the like. However, no research has been performed as to whether they actually need this food or simply eat the vegetables in the competition for food.

Scarlets are usually peaceful towards other fishes, but they shouldn't be kept with rays as they may behave badly towards them. Scarlets can also be nasty to conspecifics, and hence are usually kept in pairs. It isn't all that difficult to determine the sexes in well-established specimens, at least as far as males are concerned, as they not only have a more pointed head and slimmer body, but also possess much longer odontodes on the pectoral-fin spine. But with freshly imported specimens you can never be quite sure whether a putative female isn't just a well-nourished male that just doesn't happen to be in spawning mood - outside

the breeding season the odontodes may shrink away rapidly. If several specimens of around the same size are available for comparison, then, viewed from below, the form of the ventral fins is a good indication of gender - they are always comparatively longer and more pointed in males than in females. Because of the variation described above, you should always try to obtain a pair from the same importation, as this will minimize the risk of accidentally mating different populations together and producing undesirable crosses.

#### Can such large fishes be bred?

Yes, they can, though the breeding of Scarlets is still far from being routine. At present Scarlets can once again be exported from Brazil, something that was banned a few years ago. During that time increased efforts were made at breeding.

Scarlets are typical cave-brooders, with the male tending and guarding the spawn. Clutches are very large, and 300-500 eggs are not uncommon. Mating can be a very rough affair, and afterwards females often look as if they have had a wire-brush applied to them. Good water hygiene and humic substances in the aquarium (Alder cones, dead leaves, peat) will ensure that the female recovers rapidly.

The spawning pipe should be closed at one end. Unfortunately there are no ready-made products for such large fishes available in the trade, so you will need to make your own. The spawning pipe should be roughly as long as the fish and slightly smaller in diameter than the width and height of the fish with its fins erect.

Unfortunately the rearing of cactus catfishes remains generally beset with problems (see Seidel, 2013), but nevertheless recently tank-bred youngsters of L25 have been available from time to time, albeit rarely.

L25a from the upper course of the Rio Xingu (Sao Felix).



#### Literatur

Schraml, E. & F. Schäfer (2004): Aqualog Loricariidae: alle L-Welse / all L-numbers. Verlag A.C.S. (Aqualog), Rodgau, 272 pp  
 Seidel, I. (2013): Kaktuswelse - stachelige Schönheiten. Aquaristik Fachmagazin 233: 4-15  
 Seidel, I. (2013): Probleme bei der Aufzucht von Jungfischen von Kaktuswelsen. Aquaristik Fachmagazin 233: 16-21



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## Marine fishes

# Copycat surgeons

by Levin Locke

In biology the term mimicry denotes a phenomenon where two different species imitate one another. In other words, they look very similar or almost identical, but belong to quite different species. Mimicry is widespread in the animal kingdom and a very interesting phenomenon, the study of which would require longer than a biologist's entire lifetime. Two species of surgeonfishes imitate dwarf angelfishes when juvenile. This is their story.

Surgeonfishes are very popular in the marine aquarium hobby. Most are brightly-colored fishes that prefer to feed on algae. For this reason some species are very popular for reef aquaria, where they

keep nuisance algae in check. But they are fascinating to keep even in fish-only aquaria.

None of the 82 species, split between six



Adult male (above) and female (below) of the Chocolate Surgeonfish, *Acanthurus pyroferus*.



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genera, practices brood care. All species spawn in the open water, and the tiny eggs, less than 1 mm across, then float among the plankton, where the larvae develop as well. Surgeonfish larvae are transparent as glass and possess remarkable spines and appendages. These larvae are termed "Acronurus larvae", as it was formerly thought that they were completely different fishes which were given the name *Acronurus*. Only later was it realized that they were simply the larvae of surgeonfishes. Up to a length of three to six centimeters the glassy *Acronurus* float among the plankton of the open sea and are transported around by the currents. Only after around 10 weeks do they develop coloration and then leave the plankton, from then on leading a bottom-oriented existence for the rest of their lives. The technical term is a benthic way of life, and is the opposite of a planktonic existence. The long planktonic phase explains why surgeonfishes usually have enormous distribution regions.

### Juvenile coloration? - only rarely!

In many surgeonfishes, above all the smaller species, there is little or no difference between juvenile and adult coloration. But there are exceptions, for example the unicornfish *Naso brevirostris* or the Eyestripe Surgeonfish, *Acanthurus dussumieri*; both species grow fairly large (around 50 cm), and we will be devoting a separate article to



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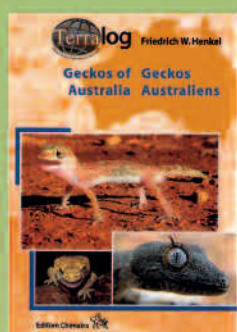


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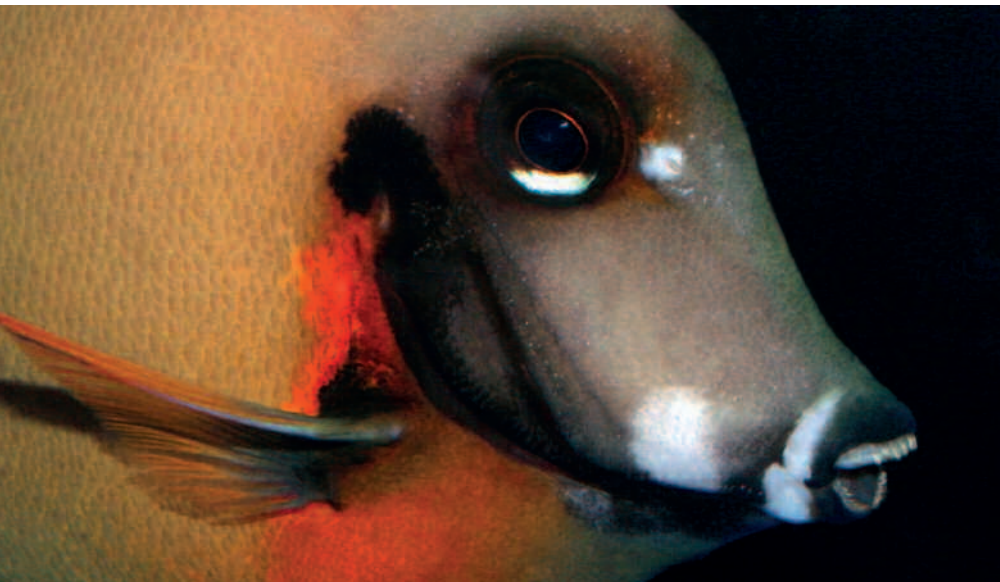
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The teeth of *Acanthurus pyroferus* are eminently suited to scraping away algae deposits.

Now the first question is, who's copying whom: the surgeons the dwarf angelfishes or vice versa? The question can be answered on the basis of two indications: the surgeons are imitating the angelfishes. First indication: *A. pyroferus* imitates several angelfish species. Second indication: the dwarf angelfishes retain their coloration life-long, while the surgeons undergo a fundamental change of coloration on becoming adult.

#### What is the purpose of the mimicry?

At first glance the mimicry by the surgeonfishes appears pointless, as dwarf angelfishes are not poisonous or dangerous in any other way. So the mimicry isn't the type exhibited by, for example totally harmless hoverflies that imitate venomous wasps or bees. In addition, both



doesn't resemble any dwarf angelfish species known to date (see Debelius & Kuiter, 2001: 37).

them shortly. There are also other surgeonfishes that may look considerably different to adults as juveniles, but in the vast majority of species it can be seen what they will look like later on. So it is all the more surprising that two species of surgeonfishes, known as the mimic or chocolate surgeonfishes, have an extremely deviant juvenile coloration confusingly similar to that of dwarf angelfishes. These two surgeonfish species are called *Acanthurus pyroferus* and *A. tristis*.

#### Who's copying whom?

As adult fishes both surgeons look rather similar and until 1993 were assigned to the same species. *Acanthurus pyroferus* is very widespread in the West Indo-Pacific, while *A. tristis* is restricted to the Indian Ocean, where it is found from the Maldives and India to Bali. In parts of their distributions, at Bali for example, both species occur together.

Juvenile *A. tristis* look like the dwarf angelfish *Centropyge eibli*, while *A. pyroferus* actually resembles at least three different dwarf angelfishes: *Centropyge flavissimus*, *C. heraldi*, and *C. vrolikii*. In addition there is a juvenile color form of *A. pyroferus* that



*Centropyge eibli* is imitated by juvenile *Acanthurus tristis*.

*Acanthurus tristis*, juvenile coloration.







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Adult *Acanthurus tristis* are largely yellow in color.

types of fishes - surgeons and dwarf angelfishes - have similar feeding habits. Both feed on biocover, with the dwarf angelfishes also consuming a certain amount of plankton as well. The dwarf angelfishes live in harems consisting of a male and one or several females, with dwarf angelfish males reacting territorially towards conspecifics. A mimic surgeonfish must thus reckon on being attacked by one

lot earlier and at a length of around two centimeters. There is no real juvenile coloration in dwarf angelfishes, some species have an eyespot (ocellus) that adults lack, but that is all.

Dwarf angelfishes are among the cleverest reef-dwellers and disappear like lightning into their hiding-places if something doesn't seem right. The advantage of the mimicry for the surgeons lies in the fact that the predatory fishes in an area where dwarf angelfishes occur rapidly learn that there is very little point in hunting these nimble fishes. So when the appreciably less nimble surgeonfishes arrive on the reef at a length of around four centimeters, they benefit from the fact that piscivores don't waste energy on hunting them, as the predators "believe" them to be relatively old and correspondingly savvy dwarf angelfishes. Fascinating, isn't it?

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### In the aquarium

Both the mimic surgeons and the dwarf angelfishes are outstanding aquarium fishes. The dwarf angelfishes should be kept in pairs or in a group, and grow to around 8 cm long. The mimic surgeons attain a maximum length of around 20 cm, and so likewise don't grow too big. They are particularly fond of eating the slimy diatomaceous algae usually spurned by other fishes. If they are well fed then adult mimic surgeons can also be kept in pairs, as it is only when they are kept short of food that they behave aggressively towards conspecifics. With adult surgeons the best approach is to introduce two individuals of



*Centropyge flavissima* is mimicked by juvenile *Acanthurus pyroferus*.



*Centropyge flavissima* is one of the few species of dwarf angelfish that have a special juvenile coloration.

*Acanthurus pyroferus*, juvenile in *Centropyge flavissima* coloration.

Photo: F. Teigler

of the fishes it is imitating.

So why go to the trouble?

The answer to the puzzle appears to lie in the life history of the dwarf angelfishes. Their spawning behavior by and large resembles that of the surgeonfishes: the eggs and sperm are released into the open water, and the larvae develop among the plankton. But - and here we come to the decisive difference - dwarf angelfishes metamorphose into reef-dwelling fishes a





## Lexicon

### Mimic surgeonfishes

*Acanthurus* means "Spine-tail".

*pyroferus* means "wild pear".

*tristis* means "sad" or "somber".

*Centropyge* again means "Spine-tail".

*eibli*: named in honor of the biologist Iräneus Eibl-Eibesfeld.

*flavissima* means "yellowest".

*heraldi*: named in honor of Earl S. Herald, head of the Steinhardt Aquarium.

*vrolikii*: named in honor of the naturalist W. Vrolik.

clearly different sizes at the same time.

*Acanthurus pyroferus* in particular is an impressive fish when adult. Because too



This young *Acanthurus pyroferus* mimics the pure yellow dwarf angelfish *Centropyge heraldi*.

## Infobox

Plankton is the term used for all life forms that float free in the water and allow themselves to be carried passively by the currents. Life forms living in the plankton are termed planktonic.

little is often fed in reed aquaria in deference water quality, it is recommended that large mimic surgeons should by preference be maintained in fish-only aquaria, where pollution of the water plays a subordinate role. Here the mimic surgeons can be fed all sorts of artificial foods without problem.

It isn't possible to tell which dwarf angelfish an adult *Acanthurus pyroferus* imitated as a juvenile. Determining how adaptation to the different dwarf angelfish species works remains an interesting field of research.

### Literatur

Debelius, H. & R. H. Kuiter (2001): Doktorfische und ihre Verwandten. Acanthuroidei. Verlag Eugen Ulmer, Stuttgart, 208 pp, 800 Fotos.

Luty, A. (1999): Doktorfische. Lebensweise - Pflege - Arten. Dähne Verlag, Ettlingen, 96 pp

Randall, J. E. (1955): A revision of the surgeon fish genus *Acanthurus*. Pacific Science 10: 159-235

Randall, J. E. (2005): A review of mimicry in marine fishes. Zoological Studies 44 (3): 299-328



Unfortunately this Chocolate Surgeonfish (above) is already in the process of changing color. Very young individuals are confusingly similar to the dwarf angelfish *C. vrolikii* (below). Photos: F. Teigler







## Red List

# The Pearl Gourami

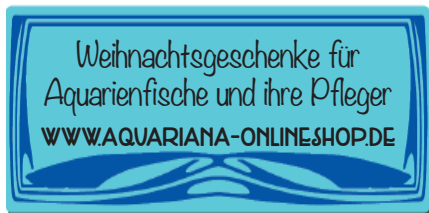
by Frank Schäfer

The first importation of the Pearl Gourami to Germany took place in 1933. Since then this gorgeous fish has never disappeared from the aquarium hobby. Are aquarists guilty of contributing to its extinction?

The Pearl Gourami is one of four species of the genus *Trichogaster* (termed *Trichopodus* by some people). Like the other three species, the Three-Spot Gourami (*T. trichopterus*), the Snakeskin Gourami (*T. pectoralis*), and the Moonlight Gourami (*T. microlepis*), this up to 12 centimeters long species is regarded as a food fish in its homeland. In places where the Pearl Gourami (*T. leerii*) occurs it is common and not endangered. Nevertheless the species figures on the IUCN Red List as being at the warning stage of "Near Threatened". Why?

## Habitat loss

The Pearl Gourami requires a very specific type of water in the wild in order to survive: black water. Black water is so named because it is the color of dilute coffee. It is very acidic (pH around 4.5) and very poor in minerals, which means that black water is also very low in "germs". In the aquarium the Pearl Gourami can also readily be kept in other types of water, but in the wild it



cannot compete with other species if its blackwater habitat disappears. If the black water disappears then so does the Pearl Gourami.

## Oil Palms - the curse of the tropics

The Pearl Gourami was formerly found in Thailand, on the Malayan Peninsula, on Sumatra, Borneo, and Riau, and perhaps also on other smaller islands in the Sunda group. Here there were numerous peat swamps, and hence abundant blackwater biotopes. But nowadays there are endless Oil Palm plantations where once there were blackwater swamps, and any search for blackwater there is in vain. The fishes that require black water are gone. In 1945 Hugh M. Smith wrote in his book on the freshwater fishes of Thailand that the Pearl

Gourami was not uncommon in the vicinity of Bangkok. Horst Linke, the experienced tropical explorer and labyrinthfish specialist, has never been able to find the species in Thailand, and according to the IUCN List it must be regarded as extinct in central Thailand. And habitat loss in the coming 10-20 years is estimated at a dramatic 30%.

## Over-fishing?

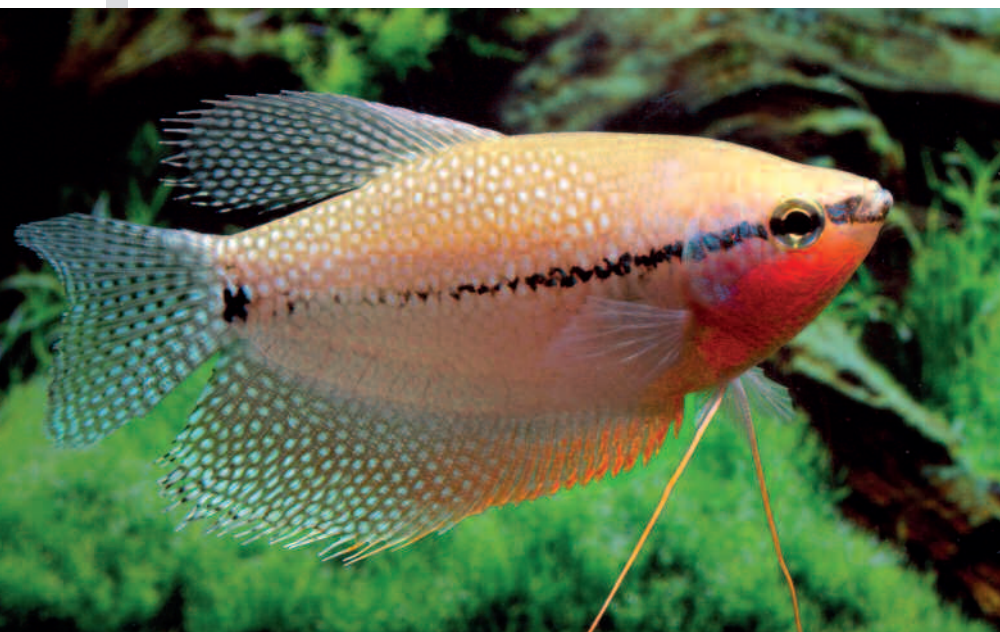
Wild-caught Pearl Gourami practically never turn up in the trade. Wild-caught *T. leerii* have never been offered for sale by Aquarium Glaser, one of the largest ornamental fish wholesalers in the world, in the last 15 years. The species is bred commercially in South-East Asia (Indonesia, Singapore, Malaysia, Thailand, Sri Lanka, Vietnam, Hong Kong), as well as in Israel, the Czech Republic, and the USA. Everywhere that the aquarium hobby is practiced there are hobbyists busy breeding the species as well. The national and international trade in this extremely productive species - it is a bubble-nest builder that produces around 700 eggs per clutch, breeds year-round, and produces a new generation every 4 - 6 months - is completely independent of collections from the wild. So over-fishing for the live trade can be unequivocally excluded as a reason for the decline in wild populations.

## Conservation breeding as required

Thanks to the aquarium hobby the Pearl Gourami isn't endangered as a species. But the wild populations are seriously threatened. Yuned Basri of the Integrated Fishery Laboratory at Bung Hatta University in Padang, West Sumatra, has begun conservation breeding of the population from Riau (Jakarta Post, 6th August 2013). There are no longer any Pearl Gouramis to be found in West Sumatra itself. It is very important to keep the various genetically different populations of *T. leerii* pure. For this reason the natural populations need to be recorded and imported as quickly as possible. Breeding itself is no problem, as it belongs to the basic exercises in the aquarium hobby.

This lovely Pearl Gourami male was bred in Hong Kong.

Photo: F. Schäfer





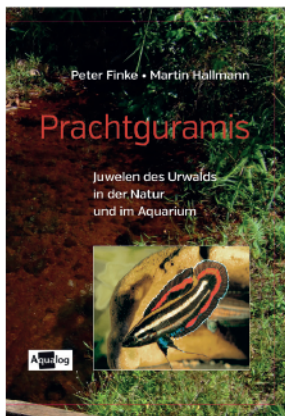
## ► Viel mehr als nur ein Fischbuch

Peter Finke und Martin Hallmann pflegen und züchten seit vielen Jahren Prachtguramis. Prachtguramis heißen wissenschaftlich *Parosphromenus* und so hat sich international der Kosenamen Paros für die Tiere etabliert. Paros werden nur ca. drei Zentimeter lang und die Männchen sind in Balzfärbung ungeheuer farbenprächtig.

Bis vor wenigen Jahrzehnten kannte die Wissenschaft nur zwei Arten und eine Unterart, dann entdeckte die Aquarienkunde diese Juwelen des Urwalds und heute sind 28 verschiedene Arten und Fundortformen bekannt. Diesen Tieren haben die Autoren ein Denkmal in Form einer 200 Seiten starken Monografie gesetzt; auf gutem, schweren, matten Papier, durchgehend farbig bebildert mit herrlichen Fotos. Dabei geht es nicht nur um die Fische.

Selbstverständlich werden alle Arten ausführlich behandelt, ihre Eigenheiten geschildert und genaue Wege aufgezeigt, wie man die kleinen Schmuckstücke im Aquarium richtig pflegt und vermehrt. Es wird die komplexe Systematik erörtert und die aquaristische Entdeckungsgeschichte der Arten beschrieben. All das erfolgt akribisch genau, gut lesbar und mit vielen wertvollen Anregungen. So weit ist das Buch „Prachtguramis“ ein außergewöhnlich gutes Aquarienbuch. Doch es ist viel mehr als das. Es ist ein flammender Appell, nicht die Augen vor der katastrophalen Umweltzerstörung in den ursprünglichen Lebensräumen dieser wundervollen Geschöpfe zu verschließen, die, kaum entdeckt, in vielen Fällen kurz vor dem Aussterben stehen.

Das Buch „Prachtguramis“ ist eine Rückbesinnung auf die wirklichen Werte der Aquarienkunde als zutiefst sinnvolle Auseinandersetzung mit der Natur unter Wasser, es weist Wege auf, die fortführen von der Einheitsaquaristik und der unendlich dummen „Tierschutz“-Diskussion unserer Tage. Darum ist das Buch „Prachtguramis“ von Peter Finke und Martin Hallmann ein Buch für jeden Naturfreund und jeder Naturfreund, auch der Nicht-Aquarianer, wird es mit Genuss und Gewinn lesen.

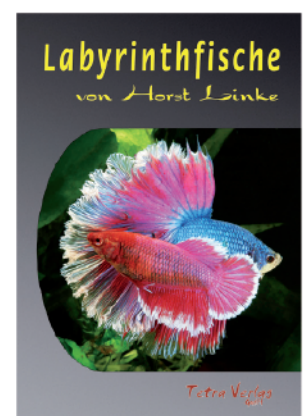


**Peter Finke, Martin Hallmann: Prachtguramis - Juwelen des Urwalds in der Natur und im Aquarium**  
Gebunden, 200 Seiten, 207 Bilder. Aqualog Verlag, ISBN 978-3-939759-27-0 **29.80€**

## ► Der Klassiker in neuem Gewand

Es war einmal eine Zeit, da brachte jeder Fachbuchverlag zu jeder wichtigen Fischgruppe ein Buch heraus. Doch diese Zeit ist längst vorbei. Lange gab es kein aktuelles Buch mehr, das die wichtige Gruppe der Labyrinthfische, also die Kampffische, Fadenfische, Guramis, Makropoden usw. vollständig behandelt.

Dieser traurige Zustand hat nun ein Ende. Der Altmeister der Labyrinthfische, Horst Linke, mit dessen Büchern, Fachartikeln und Vorträgen schon ganze Aquarianer-Generationen erfolgreich das Hobby erlernten, hat ein brandaktuelles, neues Buch über alle Arten der Labyrinthfische vorgelegt. Endlich wird damit eine schon lange bestehende, schmerzliche Lücke geschlossen, denn - nicht zuletzt dank Horst Linke - bei den Labyrinthfischen wurden in den letzten 15 Jahren sehr viele neue, zum Teil wunderschöne Arten entdeckt. Alle Arten der asiatischen Labyrinthfische werden in ausführlichen Portraits mit wunderschönen Farbbildern vorgestellt, von den afrikanischen Arten werden die im Hobby tatsächlich anzutreffenden Arten abgehandelt. Fast jede Art hat Horst Linke selbst auch im natürlichen Lebensraum aufgespürt, so dass die für eine erfolgreiche Aquarienvpflege und Zucht so unentbehrlichen Biotopdaten ebenfalls im Buch vorhanden sind. Dieses Buch gehört in die Bibliothek jedes ernsthaften Aquarianers, auch wenn er oder sie sich nicht speziell mit Labyrinthfischen beschäftigt. Es ist einzigartig, denn es gibt weltweit nichts vergleichbares.



**Horst Linke: Labyrinthfische. 24,7 x 17 cm, Paperback, 360 Seiten, 616 Farbfotos**  
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**Aqualog**  
KIDS

## Kissing Gouramis - pink and neat

A fish species with the jolly name of Kissing Gourami is almost always available in the aquarium trade. Sometimes you can see how it got this name, when the fishes pout their lips and press them together. It looks as if the fishes really are kissing! In reality, however, they are fighting one another when they do this.



pink

wild



Kissing Gouramis belong to the group of fishes that breathe only partly via their gills. They have to take in additional air at the water's surface, as otherwise they will drown!

### Pink, checkered, or gray-green

Kissing Gouramis are usually pink in color. But this is a cultivated form that doesn't occur in the wild. Wild Kissing Gouramis live in tropical South-East Asia, where they are found in lakes and rivers. They are gray-green in color and have rows of dark dots on their sides. They also have black edges to the dorsal fin and the long fin along the belly, which is called the anal fin. There are sometimes also checkered specimens, again a cultivated form.

### These fishes grow big!

If you would like to keep Kissing Gouramis in the aquarium then you should know that they can grow a lot larger than the majority of standard aquarium fishes. The world record stands at 30 centimeters! Normally, however, they grow to about as large as the hand of an adult man. Hence the aquarium should be 120-150 cm long if you want to keep these fishes. The sexes cannot be distinguished in juveniles, so buy at least five specimens. Once you get them back home you will see how they use their remarkable mouths to graze plants, rocks, wood, and so forth. They are actually eating the tiny life forms - algae and single-cell organisms - that grow there.



### Peaceful gouramis that kiss instead of biting



Kissing Gouramis are peaceful among themselves and towards other fishes. They don't practice any brood care and don't occupy territories. They use the "kissing" to measure their strength among themselves. But it is normally only the males that kiss, as in that way they establish who is the stronger. The winner gets to mate with the females watching the contest. The eggs are very numerous, numbering into the thousands. They float at the water's surface and are usually immediately treated as a tasty snack by the other aquarium fishes. Each egg is only as large as a pinhead and the babies that hatch from them are tiny.



## i

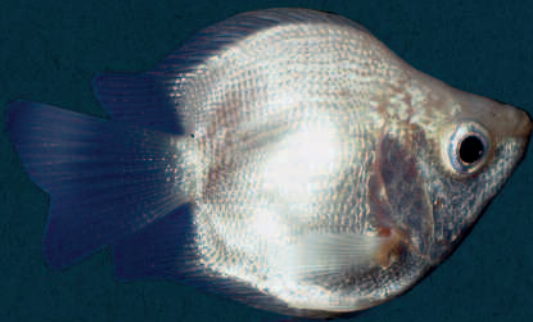
## Infobox for Parents

## Dear Parents,

Because of the expected eventual size of Kissing Gouramis they should be kept only in large aquaria. Before buying them you, Dear Parents, should buy a book on setting up and maintaining an aquarium or borrow one from the local library, and read it together with your child.

The correct name for Kissing Gouramis is *Helostoma temminckii*. In their homeland they are food fishes and all the specimens in the trade come from fish farms. They can be kept in any mains water. They require a temperature between 20 and 30 °C, with 24-26 °C being ideal.

Kissing Gouramis have specialized mouths and cannot manage large morsels of food. So special attention must be paid to feeding.



The "Balloon" cultivated form with a deformed spinal column is despised as unnatural in European countries, but such deformities also occur in the wild.

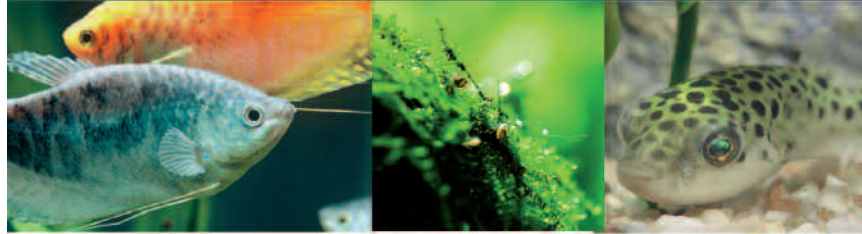
The name gourami derives from the usual name for the Giant Gourami (*Osphronemus goramy*) in Java and is used in English and other languages for a whole series of different labyrinthfishes. Labyrinthfishes are so called because they have an accessory respiratory organ called the labyrinth, thanks to which they are able to breathe atmospheric air.

## Hazards

Very careless handling can theoretically result in being stabbed by the fins; but the "sting" isn't poisonous. In general there is only one disease that fishes can transmit to humans, a tuberculosis of the skin that manifests as wounds that are reluctant to heal. The infection is, however, extremely rare and more likely to be picked up by visiting swimming baths than via aquarium fishes.

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Mehr Informationen unter:  
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## Terrestrial hermit crabs - Heinis?



Sometimes it is hard to decide which is neater - the terrestrial hermit crab or its shell.

Jolly terrestrial hermit crabs are often offered for sale in the pet trade, sometimes under the nonsense name of "Heinis". Terrestrial hermit crabs are very interesting terrarium occupants, which can give you years of pleasure in return for very little work. Terrestrial hermit crabs come from hot countries. They are found in South America, Asia, and Australia, where they live close to the sea. They sleep all day then come out at night like little goblins.



Terrestrial hermit crabs are sociable creatures and like to be kept together with their own kind. They are usually active at night.

### Hard shell, soft tail

The majority of other crustaceans protect themselves against enemies by having a hard shell covering the whole body. But hermit crabs have a very soft rear body, and without their snail shells they are defenseless and anything can eat them. So hermit crabs leave their shells only very rarely, when they have outgrown them. They then move into a new, larger, shell. Sometimes they drive out the previous owner who then runs around the terrarium naked and afraid. So you must always put enough snail shells of various sizes in the terrarium!



Terrestrial hermit crabs are good climbers!

### Omnivorous and gregarious



Terrestrial hermit crabs eat almost anything: fruit, vegetables, dead leaves of trees, fish food, small dead creatures. There is even a special food for terrestrial hermit crabs in the pet shops. But they only eat a fairly small amount of food at a time, so you shouldn't feed them too much at a sitting as otherwise the food will go bad and the hermit crabs may get sick as a result. Never keep these crabs singly. There must be at least five for them to be happy, and more will do no harm. Males and females look the same. It doesn't matter whether you have males or females, the important thing is to have several.

### Very important: a water bowl!

You should spray the terrarium with lukewarm water from a plant spray every morning and evening, and the terrestrial hermit crabs will enjoy this a lot. Although these crabs live on land, they breathe via gills which they need to keep permanently damp, as otherwise they will suffocate. For this reason terrestrial hermit crabs take a bath once a day, sometimes more often. You must put a dish of clean water in the terrarium for them every day. Some species of terrestrial hermit crabs also like salt water, your pet dealer can advise you on this.





## i

## Infobox for Parents

## Dear Parents,

Terrestrial hermit crabs are eminently suitable as first terrarium animals for children, as the effort required by essential daily maintenance is only minimal. All that is required is daily spraying and cleaning of the water bowl.

## Setting up the terrarium

The terrarium should measure at least 40 x 30 x 30 cm, and larger is better. It must be of all-glass construction with sliding doors at the front, plus a lower and an upper ventilation slit. Preserving jars and plastic terrariums are not suitable as air exchange won't work properly in them: carbon dioxide will accumulate at the bottom and poison the occupants. The terrarium should be filled to the level of the lower ventilation slit with terrarium soil from the pet store. Don't use potting compost, which often contains fertilizer or pesticide residues. And don't use garden soil as it will rapidly become rock hard in the terrarium. Don't use peat, as the acid pH won't suit the hermit crabs. The substrate should be at least 15 cm deep; any shallower and the crabs won't be able to burrow sufficiently deep to molt, and in such cases they often don't molt at all and die. You can use stones, bogwood, and twigs as decoration. Lighting isn't necessary, and the terrarium should never stand in the sun. The temperature in the terrarium should be 20-26 °C.

## Maintenance tasks

Some food and fresh water should be provided daily and the terrarium sprayed with hand-hot water from a plant spray until all the walls are damp. The substrate should be moist but not wet. It isn't usually necessary to change the substrate, and regular major clean-ups aren't required. A handful of dead leaves in the terrarium will ensure the crabs can always find something edible.

## Hazards

Your child can learn the normal rules of hygiene through dealing with the crabs (ie washing hands after handling, not putting animals in mouths, not eating any leftover food), but there are no known diseases that can be transmitted to humans by terrestrial hermit crabs. These crabs are completely harmless, though they may deliver a hefty nip, albeit very rarely! Impress on your child that any wild animal will be in fear of its life when picked up. Usually these crabs will withdraw into their shells when disturbed, but sometimes they will defend themselves as well.

# Neu!

# T5 UVB







## The natural aquarium

# Leaf litter in the aquarium

by Birgit Bautz

The natural habits of the majority of aquarium fishes lie in more or less heavily wooded regions. The dead leaves from the trees form the basis of the food chain in these otherwise very nutrient-poor waters.

Hence leaf litter has a role to play in practically every aquarium, perhaps with the exception of Lake Malawi and Lake Tanganyika tanks. But even there leaves - used in moderation - have beneficial properties.

### It all began with Catappa

The beneficial properties of dead leaves were already known to the forefathers of the aquarium hobby back around 1860. But, just as in many other areas, this knowledge was lost with the passage of time, and it wasn't until around 10 years ago that people began to remember the old lore. Professional breeders in South-East Asia were using the large, slow-to-decay leaves of the Sea Almond tree (*Terminalia catappa*) to stabilize delicate fishes. Catappa leaves were even added to the water used for transportation. And thus people here in Europe noticed the leaves and rapidly established how useful they were in the aquarium.

### Splendid variety

Sea Almond leaves are currently perhaps



the best-known, but by no means the best or the only leaves that can be used in the aquarium. Many other types of leaves - above all the Beech (*Fagus sylvatica*) - have quite fantastic properties of benefit to fishes. Secondary plant substances in general lead to strengthening of the immune system and of the skin in particular. The latter process increases resistance to pathogens many times, even in highly susceptible fishes.

### Via the water and through the stomach

A wide variety of leaves can and should be placed in the aquarium. The leaves of large oaks (*Quercus* spp.) contain tannic acid, which has a fungicidal effect; walnut trees (*Juglans* spp.) are effective against

pathogenic bacteria. Birches (*Betula* spp.) can be used for abscesses and ulcers. It is almost always dead autumn leaves that are used, as green leaves contain other active substances and lots of sugars, which can have a deleterious effect (cloudy water, etc.). But sometimes the sugar content can also be exploited. Green walnut leaves, for example, are a fantastic foodstuff for loriciid catfishes, shrimps, and crabs. Green birch is more effective as a medicinal plant than its dead leaves. A tea is brewed from its leaves and added to the aquarium.

It shouldn't be forgotten that in the wild the digestive tract of fishes, even carnivorous species such as dwarf cichlids (*Apistogramma* spp.), is largely filled with detritus, ie decaying plant remains (mostly dead leaves!). Even though the nutritional value of this detritus is low, it retains those protective properties. Thus many diseases of the digestive tract hardly ever occur in fishes that are provided with leaf litter in the aquarium.

Obviously leaves, regardless of the species, are not a cure-all. But very many problems don't occur at all if leaves are used in the aquarium. And prevention is always better than cure!

(to be continued)

There are lots of different trees in the rainforest - and lots of different types of leaves! Photo: F. Schäfer



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