

# Journal of the Catfish Study Group



June 2018

Volume 19, Issue 2



# PlanetCatfish

Barlows Aquatic Trading

Bespoke Aquarium Manufacturers



[www.scotcat.com](http://www.scotcat.com)



maidenhead Wigan  
aquatics  
fishkeeper.co.uk



## Practical Fishkeeping

nature|2|aqua  
... der etwas andere Aquaristik-Shop

Charles Austen  
Pumps Ltd



# British Cichlid Association



**G.B.W** Products & Services  
Brian Walsh

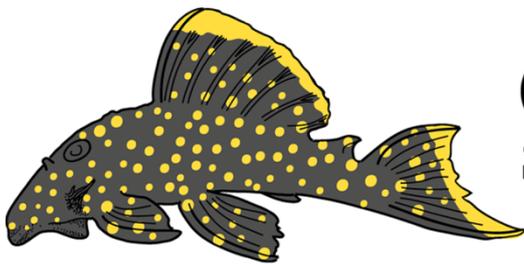
High class joinery  
Cabinets  
Furniture  
Wood Carvings

Phone: 01254 770507  
Mobile: 07977 428788  
Email: [g.b.w@brianwalsh1.fooserve.co.uk](mailto:g.b.w@brianwalsh1.fooserve.co.uk)

Contents

Editor's report	5
Chairman's report	6
Spawning <i>Pseudacanthicus</i> sp. L065 – The blizzard cactus pleco	8
A threatened pencil catfish from the high Andean plateau: <i>Trichomycterus catamarcensis</i> (Siluriformes: Trichomycteridae)	13
Spawning <i>Hypostomus</i> sp. L346 – Another LBJ	16
On the identity and validity of <i>Callichthis punctatus</i> Valenciennes 1834	22
Sustainable Ornamental Fisheries	32

Cover image: *Pseudacanthicus* sp. L065, male with egg mass. Photo: Mark Walters



# CATFISH STUDY GROUP

## Open Show & Auction

Derwent Hall, Darwen  
Lancashire BB3 0DQ

16 September 2018

---

[chairman@catfishstudygroup.org](mailto:chairman@catfishstudygroup.org)  
for more information and to reserve a lot

[www.catfishstudygroup.org/events](http://www.catfishstudygroup.org/events)  
or call Brian Walsh on 01254 776567

35 classes

Top prizes

Mega raffle

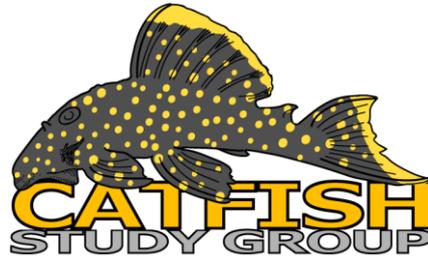
Free Parking



csg.members

Pies, pop, butties & brews

---



- The Journal of the Catfish Study Group (JCSG) is a subscription-based quarterly published by the Catfish Study Group (CSG). The journal is available in print and electronic platforms. Annual subscriptions to JCSG can be ordered and securely paid for through the CSG website ([www.catfishstudygroup.org](http://www.catfishstudygroup.org)).
- The JCSG relies on the contribution of content from its members and other parties. No fees or honoraria are paid in exchange for content and all proceeds from advertising and subscriptions are used to support CSG events and activities. At the end of the financial year, any remaining funds generated from subscriptions to JCSG are transferred to the CSG Science Fund. The Editor and other CSG personnel involved in the production of the journal do so voluntarily and without payment.
- Please support the CSG by contributing original articles concerning catfishes that might be of general interest to JCSG subscribers. Word processor files (e.g., .doc, .docx) and high-resolution images (at least 300 dpi and 8.5 cms wide) can be sent as email attachments to [editor@catfishstudygroup.org](mailto:editor@catfishstudygroup.org). If necessary, the Editor will work with contributors to structure and polish text and format images for inclusion in the journal. The Editor reserves the right to edit submitted text and images to improve flow and comply with the layout and page limits of the journal. Any manuscripts that propose taxonomic or nomenclatural changes will be forwarded to a qualified professional for evaluation.
- None of the text or images contained in the JCSG may be reproduced (in whole or part) in digital or print media without the written permission of the Editor. Text and image copyrights remain with the author and original photographer, respectively. All rights are reserved. The CSG assumes no responsibility for the views or opinions expressed in contributed articles.
- The CSG gratefully acknowledges the aquatics manufacturers, retailers, small businesses and private individuals that support us directly by providing funds, merchandise for prizes, as well services, promotion and other forms of support for our various events and activities. If you wish to help the CSG in this way, please contact [chairman@catfishstudygroup.org](mailto:chairman@catfishstudygroup.org).

---

If you would like to advertise in JCSG, here are the options we currently offer. All charges include 20% VAT and are used to support CSG events and activities. Please save advertisements as Portable Network Graphics (.png format), at least 300dpi and sized according to the table below. We can also help prepare your advertisement at no extra charge. Please contact [editor@catfishstudygroup.org](mailto:editor@catfishstudygroup.org) for further information.

<i>Size (page)</i>	<i>Approximate height × width (cm)</i>	<i>Colour</i>	<i>Black &amp; White</i>
Full	26 × 18	£148.00	£50.00
Half	13 × 18	£80.00	£30.00
Quarter	13 × 9	£50.00	£20.00
Eighth	6.5 × 9	£30.00	£12.50
Sixteenth	3.25 × 9	£18.00	£8.00

## Editor's report

Thank you and welcome to our new subscribers if this is the first issue of our journal you have received. Thanks for your support, and thanks also to those of you continuing your subscription or adding a digital subscription to your print edition. ALL the money we receive though digital subscription goes directly into our Research Support Fund and we are already putting the money to good use in supporting two young catfish researchers in Argentina (see article by Julieta Andreoli Bise on the imperiled trichomycterids she studies in this issue).



Typically, our summer issue is shorter than others, but this years is an exception and busting with pleco spawning reports by Mark Walters and a hardcore taxonomic study of some widely-used but poorly-understood cory names by the one-and-only Steve Grant. I'm delighted to see articles of this quality being submitted to the CSG journal. I'm also happy with the work we've done to help bridge the gap between science and the hobby over the past four years.

March to October is the busy half of the year for my work schedule, so I've not been able to contribute much in the way of content. However, the committee has kept me fully occupied generating flyers, banners and, of course, the journal and all that goes along with that. Despite my best efforts, some members are unhappy with my work as journal editor and have made a written complaint. The rest of the committee has responded to this complaint after requesting a complete explanation and response from me to the charges made, which was duly provided and accepted. In the interests of transparency, I encourage all subscribers to contact me if they have any criticisms concerning content, how certain personalities in the aquatic world are

portrayed or uncelebrated, or for any other reason you are frustrated with my work marshalling, editing and formatting articles submitted for publication in your journal.

I have sought to provide subscribers with a high-quality journal containing informative, original and germane articles that are well illustrated and which provide testament to the work the CSG is doing in its mission to further the study of catfishes. I provide contributors with a rapid-turnaround and free outlet for their work, and assist with editing, fact-checking and development of the text as well as photographs and citations at no charge. In this way, contributors receive a mild form of peer-review from a PhD systematic ichthyologist and I hope they feel this improves their work and encourages them to contribute in the future. I spend approximately 24-40 hours (i.e., 3-5 workdays) preparing each issue of the journal. Like the rest of the committee, I volunteer my time without demand or expectation of any payment, favour or thanks for my work.

My motivation is to see the CSG thrive and to enhance the exchange of knowledge acquired by aquarists that are observing and recording catfish behaviour that is poorly documented in the technical literature. This information is of tremendous value to understanding these wonderful animals, but is unlikely to be collected by professional ichthyologists that are pressured to obtain grant funding and conduct high.impact research. I would love to see more members contributing content, as I know how much you all know and how important it is to make that information available to as wide an audience as possible. I can help if you find it difficult putting your thoughts and knowledge down on paper.

If you would like to contribute to our journal or suggest a theme or article for a future issue, please email [editor@catfishstudygroup.org](mailto:editor@catfishstudygroup.org).

Best, Michael

## Chairman's report

It's been nice to devote some quality time to my fish keeping since the CSG Committee delivered the Convention in March, with the result that I've added another five species of suckermouth catfish to my list of successful spawnings.



I've included a couple of accounts in this issue and used some of the new photo and video footage in a presentation at our May meeting with sponsor Countryside Aquatics at our annual CSG away day in Staffordshire.

Thanks to the resourceful nature of aquarists, and in true McGyver style, we were able to set-up a location suitable to deliver a presentation at very short notice, which otherwise would have been difficult for an outdoor event on one of the sunniest days of the year!

As we look forward to future CSG events, including planning towards the Open Show and a visit to the National Aquarium of Denmark, I am conscious of deadlines for the 2019 AGM. It seems a long way off but it's an important one with the end of current term for all committee members.

Of course, all current committee members are entitled to re-election, either unopposed or via a ballot in the case of other members putting themselves forward for a role. Any other members are also entitled to be elected into

committee roles according to the CSG constitution.

The reason I mention it now is to give all members the time to consider if they would like to be involved in the running of the club. The roles which will be up for election are as follows: Chair; Treasurer; Secretary; Convention Manager; Editor; Sales Secretary (merchandise); Auction Manager; Show Secretary; IT Secretary; Catering Manager; Press Secretary (promotions); Breeders Award Programme Manager.

Currently, committee members each hold one or more of these roles and we are often overburdened as a result. To be eligible for a position, you must have been a CSG member for at least a year. To hold the roles of Chair, Treasurer, or Secretary you must have held a committee post for at least three years.

Profiles and responsibilities of the positions are detailed in the constitution which can be requested from the Secretary. If you are interested in any of the roles, please contact the Secretary before 31<sup>st</sup> October 2018, or have a chat with any of us on the current committee at upcoming events and we'll gladly explain how things work behind the scenes.

I hope to continue in my current role if re-elected and hope the other current members of the committee carry on the great work they do in managing the foremost catfish group on the planet!

Cheers, [Mark](#)



CSG Away-day meeting at Countryside Aquatics

# EBO-AQUARISTIK



EBO Fish Foods  
Nitrate Resin  
Breeding Boxes  
Decorations  
Clay Products

WWW.EBO-AQUARISTIK.DE

## SPIRULINA PASTE



-Special Rearing Paste

-Forms a film of food in the rearing box

-Optimal rearing of Sturisoma and others Catfish, Cichlids etc.

## PROFESSIONAL SOFTGRAN MUSSEL



-Natural source of protein

-Well digestible and compatible

-Contains green-lipped mussel

-Proven for breeding Discus, Geophagus, hypancistrus, Pseudacanthicus etc.

## Spawning *Pseudacanthicus* sp. L065 – The blizzard cactus pleco

By Mark Walters



*Pseudacanthicus* sp. L065, adult. Photo: M. Walters.

My interest in keeping cactus plecos was stimulated at a Catfish Study Group Convention a few years ago when Ingo Seidel presented his experiences keeping them in captivity.

To be honest, I had always regarded them as out of my reach as a pleco keeper, considering the relative large size and notorious belligerence towards other members of their species. I didn't have a tank large enough to house a group of them, which is a prerequisite to attempt any breeding of course! I had followed the accounts from a number of 'pseuda' experts online and the number of successful breeders I could count on one hand. They usually utilised large aquaria with adult fish of 25cm+, which is a generalisation I know, but it was enough to put me off.

Ingo's talk, however, stimulated my interest further, especially when he shared his account of breeding one of the smallest members of the genus *Pseudacanthicus* sp. L065 – the blizzard cactus pleco (fig. 1). The added attraction was that a number of individuals could potentially be housed together without 'The Battle of the Plecos' being enacted on a regular basis. As it happened, Ingo had brought over a group of

youngsters to sell at the event and after a momentary loss of reasoning I bought half a dozen.

To cut a long story short, I maintained the group for about two years and noticed a fair amount of conspecific aggression, leading to the mauling and death of two of the group. I assumed this was male-on-male fighting, rather than any rough breeding interactions and got discouraged by the potential of losing more of the group. In a fit of pique, I sold them to a fellow aquarist and moved on to other projects (including successfully breeding *Pseudacanthicus leopardus*.)

Over the next couple of years, I realised just how rare the blizzard cactus pleco was in the hobby, having only been collected from the wild on a handful of occasions and probably not for the last 10 years. All the fish in the hobby appeared to be derived from old imports and a few tank bred fish. I rued my decision to move the fish on and left it behind me.

However, a fascination with the smaller pseudas didn't quite leave me and it was a trip to fish store in Crewe when my interest was rekindled. I was quite shocked to see a number



Male *Pseudacanthicus* sp. LO65 in spawning cavity (roof removed) with egg mass. Photo: M. Walters.

of tanks with groups of young blizzard cactus plecos and following a chat with the shop owner was made aware of a local unnamed breeder who supplied him with his offspring from a number of *Pseudacanthicus* species (including *P. leopardus*). To this day, I don't know the identity of the mystery pseudo breeder, but would love to hear from them. Without hesitation, I bought six LO65, leaving an unexpected hole in my bank account and I hastily made room for them in my quarantine tanks.

This time I provided even more structure in their aquascaping to try and dissipate any aggression. A much larger tank, at least a dozen caves and a beaver-dam of wood to provide enough options for territory and escape from



*Pseudacanthicus* sp. LO65, adult. Photo: M. Walters.

any dominant males. I spread the word about the LO65 in the shop in Crewe to other pseudo keepers, but remain surprised that three years later the shop still has a large number of the original offspring from the local breeder, who I am informed has since stopped keeping them.

The group lived quite happily and peacefully for a couple of years before I felt they were probably mature enough to breed. The species starts off its life as a very attractive black fish with white spots, hence the common name of 'blizzard pleco'. As the fish grow and mature, they gradually lose the spots and become more black – which might discourage some aquarists from keeping them. Personally, the development of the fish is part of their appeal and they certainly retain their more attractive phase for enough time to consider them an attractive species. The transition to adulthood brings a new challenge in their care – captive reproduction.

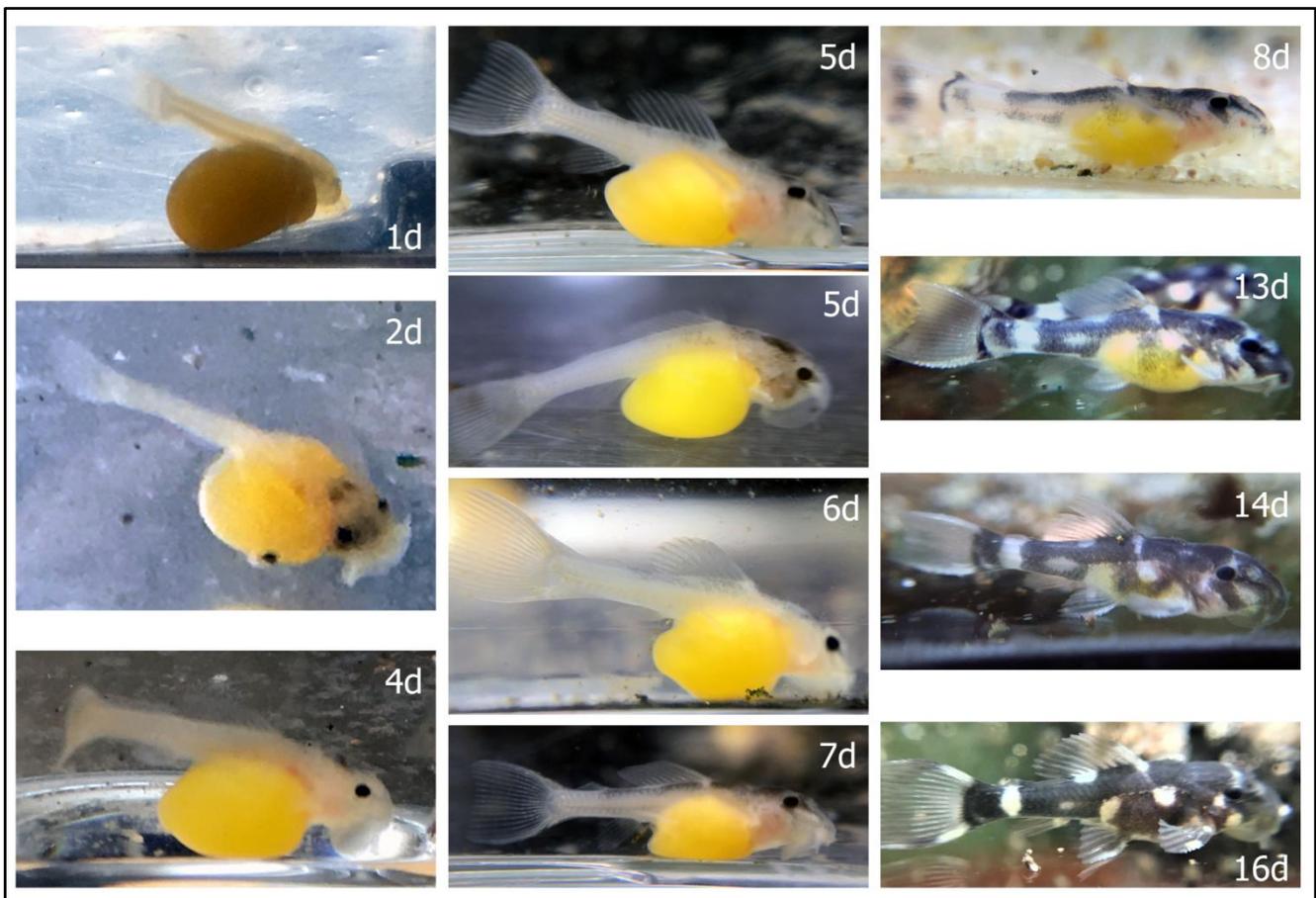
My fishkeeping friend and world-wide *Pseudacanthicus* expert Ole Paulsen had been goading me about my blizzards for a while. He was keen to point out how important this little species was and asked repeatedly why I hadn't bred them yet! I had been gradually rising to his challenge, conditioning the fish and increasing the frequency of water changes and the fish gradually increased their activity and a few trial

trappings were noticed. At least this gave me an indication of compatible pairs in the tank and I continued to keep a hopeful eye on them.

With all of my fish, I keep the lighting low, with most of my tanks appearing to be in the dark. This is exaggerated by tannins in the water and the copious amount of wood and caves I furnish my tanks with. Personally, I don't understand why catfish keepers have such brightly lit tanks with a yearning for crystal clear water – nothing could be so far removed for many catfish which live at depth, in crevices or in the shade, reducing the potential for predation or in an effort to protect their offspring. At the last L-Welse conference, we heard from the first successful spawning of *Pseudacanthicus* LDA105 – the 'typhoon cactus pleco' who explained that spawning only occurred after the tank was kept in darkness. Most of my pleco breeding successes have been in darkened tanks, often when I least expected it! The LO65 was no exception and I rarely saw the fish in the tank due to its black-out conditions.

I was surprised one morning to find one of the fish deep in a cave performing the characteristic 'fanning' behaviour of brooding males. I wasn't sure if it was trapping behaviour or something even more exciting so had a closer look with a low-powered torch. I was delighted to find that he was brooding a large clutch of eggs, and after I'd calmed myself I needed to decide what to do next; leave well alone or remove the eggs. Based on previous experience of *Pseudacanthicus* liking the taste of their eggs, I opted for the latter.

It appeared that the fish had spawned a few days prior to me spotting them, and if I had realised that I might have been more inclined to go for option 1 – the male was obviously doing a good job. But it was too late, I had removed the eggs and now the hard work would begin. Coincidentally, the fish were probably enjoying some peace and quiet and spawning whilst I was away from home delivering a CSG presentation on breeding plecos. During the talk I was encouraging the congregation to visit the store in Crewe and devote a tank to keeping this rare cactus pleco!



Developmental sequence of *Pseudacanthicus* sp. L65. d = days after hatching. Photos: M. Walters.

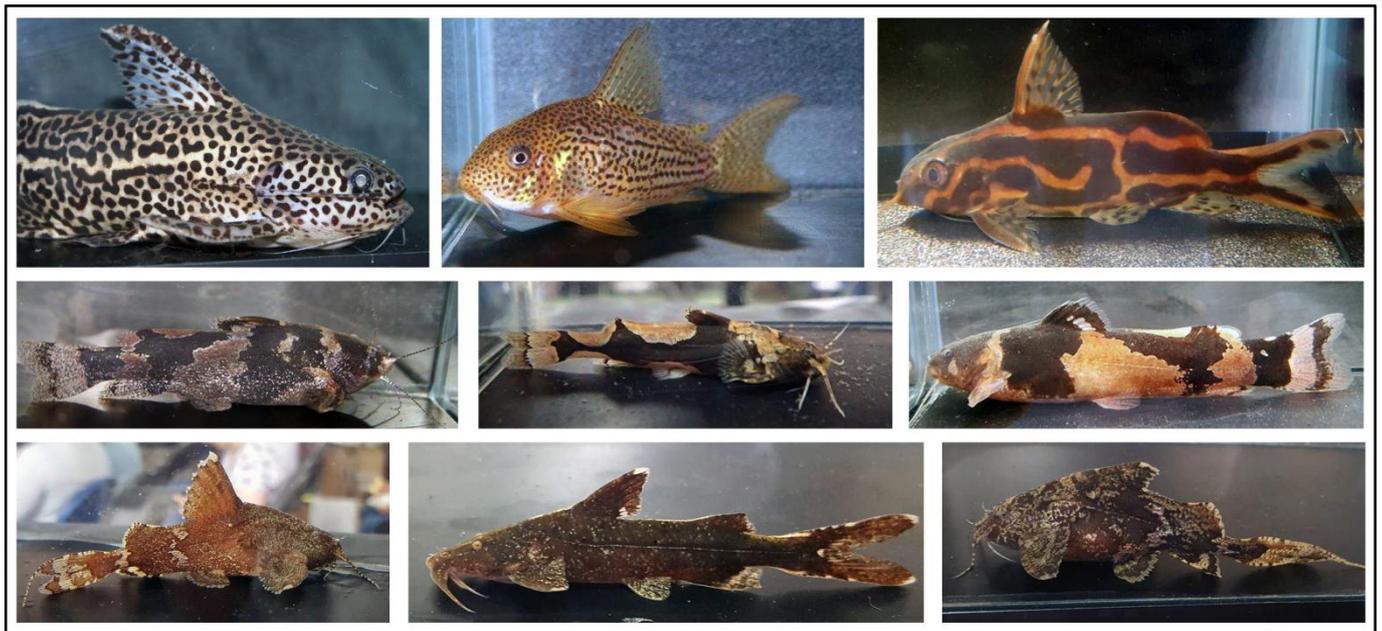
Back to the care of the eggs. I employed a technique I had found successful for raising leopard cactus plecós. Rather than hatching them in tank water, I used warmed rainwater with a few drops of methylene blue whilst suspending the eggs in a clean net with aeration beneath. The theory is a lower bacterial content in the water and less likelihood of the eggs fouling. After only two days, the eggs started hatching and I transferred them to a second fry raising container.

From the 150 eggs, only 30 hatched successfully, with the remainder either hatching prematurely and dying or succumbing within a day or two of hatching. I made a mental note to leave any future batches of eggs with the male, who would no doubt do a better job than me in raising the eggs.

Over the course of the next two weeks, I changed water on the raising container up to 3 or 4 times a day, removing the occasional dead fry. It took a full 16 days for the egg sac to be fully absorbed. I had added some small pieces of wood and a few leaves, plus a thin layer of sand by day 12 – to provide some microbial food if the fry were ready to feed.

Proper feeding commenced after day 14, with the addition of soaked powdered spirulina powder. After day 16, I started adding increasing quantities of powdered New Life Spectrum 'Thera A' to the spirulina powder and also introduced newly hatched *Artemia*. I interspersed the dried food with feeds of Ebo fry paste. After the egg sac had been fully absorbed, the behaviour of the fry shifted towards active grazers of whatever foods were offered and growth rate visibly increased. The sequence of development images shows the gradual development of the typical juvenile pattern, which the fish retain for the first three years of life.

A typical behaviour of *Pseudacanthicus* fry is aggressive competition with their siblings, which in my experience can lead to the death of many of the young fish. This usually starts to occur after a couple of months, with the tell-tale signs of bite-sized patches on their bodies. They usually die soon after sustaining the injury. I plan to disperse my young L065 around the fish house before this becomes a problem, at which time they will probably be ready to spread their fins in bigger tanks.



Selected entrants in the 2017 Annual CSG Open Show and Auction



Unique Formula  
with Insect meal



## FishScience Catfish Foods

**Recreates the natural insect based diet that most tropical fish would eat in the wild**

Mini Algae Wafers contain essential roughage to allow effective digestion

Environmentally friendly and sustainable

Naturally enhances the colour of your fish using Spirulina algae, paprika and krill.

Contains garlic to support a healthy immune system

**... and the fish really like it!**

**[www.fishscience.co.uk](http://www.fishscience.co.uk)**

**A threatened pencil catfish from the high Andean plateau:  
*Trichomycterus catamarcensis* (Siluriformes: Trichomycteridae).**

*By Julieta Andreoli Bize*



*Trichomycterus catamarcensis* showing the absence of pelvic fins. Photo: J. Andreoli Bize.

In the high Andean plateau, habitat modification, mining, and the introduction of exotic species (e.g., rainbow trout) continue to threaten freshwater species,

especially the pencil catfishes of family Trichomycteridae (Fernandez 2005, Fernandez and Andreoli Bize 2017).



Fig. 2: Type locality of *Trichomycterus catamarcensis*, Laguna Blanca stream, Belén, Catamarca province, Argentina. Photo. J. Andreoli Bize.

*Trichomycterus catamarcensis* (Fig. 1) is an endemic species described in 2000 from the high Andean Plateau of Argentina. This catfish is characterized by the lack of a pelvic girdle (and fins), the presence of a patch of odontodes on the interopercle and opercle, 37 to 39 vertebrae, and 18 to 20 ribs.

The species is similar to *Silvinichthys leoncitis*, except for the supraorbital sensorial canal being reduced. It lives in a small stream (Fig. 2) at 3,500 m above sea level in Belén, Catamarca. This small catfish feeds mainly on benthic macroinvertebrates and accidentally ingests filamentous algae and sand. Its reproduction is unknown. Other aquatic vertebrates captured in this stream include *Trichomycterus belensis* (Fig. 3) and tadpoles and adults of an

undescribed *Telmatobius* species (Leptodactylidae).

*Trichomycterus catamarcensis* is negatively affected by local human activity and this small stream needs protection from local and federal governments.

## References

- Fernandez, L. 2005. Risk of extinction of a rare catfish of Andean groundwater and its priority for conservation. *Ambio* 34 (3): 269-270.
- Fernandez, L. and J. Andreoli Bize 2017. *Trichomycterus alterus* (Marini, Nichols & La Monte, 1933) and *T. corduensis* Weyenberg 1877 (Siluriformes: Trichomycteridae): new records from High Andean Plateau. *Check List* 13 (2): 2068: 1-5.
- Fernandez; L. and R.P. Vari 2000. New species of *Trichomycterus* (Teleostei: Siluriformes: Trichomycteridae) lacking a pelvic fin and girdle from the Andes of Argentina. *Copeia* 2000 (4): 990-996.



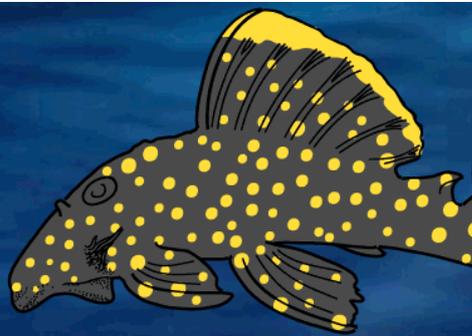
Fig. 3. *Trichomycterus belensis* showing the presence of pelvic fins, in Facultad Ciencias Exactas Naturales (FACEN) aquarium. Photo: J. Andreoli Bize.

Please mark your calendar for the 40<sup>th</sup> Annual

CSG Convention: **March 17–19 2019**

Check our [website](#), [journal](#) and [Facebook group](#) for updates!





# CATFISH

STUDY GROUP

Jacob Fortlingsvej  
2770 Kastrup  
Copenhagen  
DENMARK

DEN BLÅ  
PLANET



15:00 27.10.2018



2 speakers/talere (English + dansk)

Backstage tour/tur

Donate a fish! Doner en fisk!



Questions/spørgsmål: [secretary@catfishstudygroup.org](mailto:secretary@catfishstudygroup.org)

## Spawning *Hypostomus* sp. L346 – Another LBJ!

By Mark Walters.



Male *Hypostomus* sp. L346 incubating eggs. Photo: M. Walters.

In the world of L-number or suckermouth catfish, the ubiquitous catch-all of ‘pleco’ can be traced to the now-rarely encountered *Hypostomus plecostomus*. The genus includes some of the first catfish to be described and to enter the aquarium trade, including the real plecostomus when imports were common from Suriname. You can read all about the true identity of *H. plecostomus* in CSG Journal Vol. 16 (3).

Unfortunately, *Hypostomus* are now largely regarded as ‘bad-boy’ plecos with a reputation as ugly brown tank-busting monsters. That tag is undeserved and better applied to the closely-related genus *Pterygoplichthys*, with *P. pardalis* being the most-common ‘common pleco’.

In fact, the genus *Hypostomus* includes many species suitable for medium-large aquaria, with some species such as *H. luteus* and *H. margaritifer* rivalling the ancintrine plecos from the clearwater streams of the Brazilian Shield in terms of colour pattern and pricetag!

For some reason, I am quite drawn to the less popular species of suckermouths and the ‘little brown jobs’ (to steal a bird-watching term,

usually abbreviated to LBJ) are as interesting to me as zebra, leopard, tiger or sunshine plecos.

So, my tanks are filled with L-numbers which have never become popular enough to gain a more common name and in 2016 I added some more to the ranks.

The CSG Convention is always a rich hunting ground for rare, cheap fish bred by expert aquarists who are more interested in their offspring finding a good home than making a



Like many other plecos, male *Hypostomus* can be recognised by larger odontodes on their pectoral-fin spines. Photo: M. Walters.



Adult male (left) and female (right) *Hypostomus* sp. L346. Photos: M. Walters.

fast buck. Oliver Frank brought some German-bred fish with him to the event a couple of years ago, including a rarely seen *Hypostomus* species. Not only rare in occurrence but exceptionally rare in being tank bred.

Now I have only come across a handful of verified *Hypostomus* spawnings: one in Amazonas magazine for an undescribed Bolivian fish; and another undescribed species in the second Wels Atlas; and a third account is reported on Planet Catfish for *H. flaveolus*. I've been unable to find any records of *Hypostomus* being spawned in the UK.

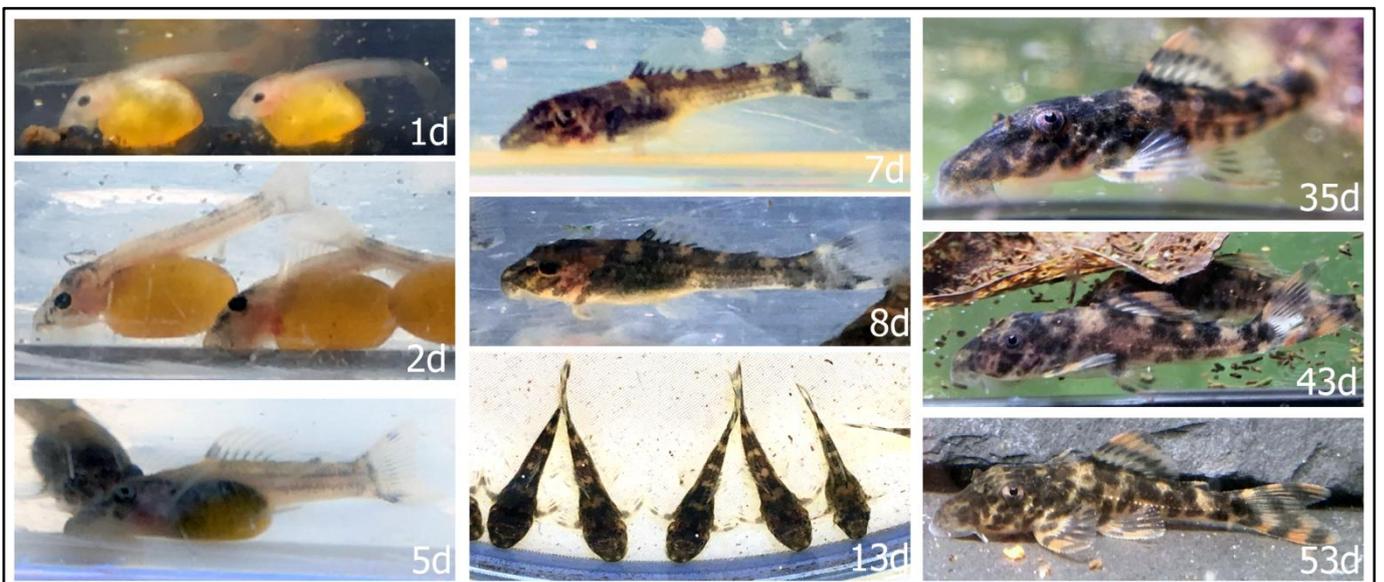
The fish brought to the Convention were identified as L346, reportedly originating from the Tocantins. My interest was stimulated by the relatively small size of the adult fish, and the fact these were tank bred – so the chances of spawning them would be greater. The third tick in the box for me was they fitted the description of an LBJ! Not surprisingly, there was only one other taker for the fish at the Convention and we split the group between us.

For the best part of two years, the four fish enjoyed the quiet life in a mixed-pleco tank, with little fuss or noteworthy activity. It wasn't until the guy who bought the rest of the group actually sold them through a CSG auction that I took more notice of mine and realized that my group might represent the only intact group of this species in UK aquaria.

I moved them into their own tank with plenty of flow from a powerful wave-maker and a selection of suitable caves. They disappeared into the tank and I didn't see them for another few months.

After the introduction of a new type of food (EBO mussel-pro) and increased water changes the group started to exhibit pre-spawning behaviour. After a week of trapping, I added a new cave and a day later spotted a solitary male deep inside it. Closer inspection with a flashlight revealed a healthy clutch of eggs.

After my own initial excitement had died down, I rushed to tell my family the great news



Developmental sequence of *Hypostomus* sp. L346. d = days after hatching. Photos: M. Walters.

# Aquatic Art Prints



Foto: Enrico Richter

*Corydoras dyphes*



Foto: Enrico Richter

*Brochis multiradiatus*



Foto: Enrico Richter

*Corydoras eques*



Foto: Enrico Richter

*Corydoras rabauti*



Foto: Enrico Richter

*Homaloptera tweedei*



Foto: Enrico Richter

*Corydoras tukano*



Foto: Enrico Richter

*Chalceus sp. „Peru“*



Foto: Enrico Richter

*Ossancora paraguay*



Foto: Enrico Richter

*Centromochlus schultzi*



Foto: Enrico Richter

*Cetapsorhamdia sp.*





ATS-Aquashop.de



**ATS EDV-Service**

ffstr. 11 • 31535 Neustadt a./ Rbge. • Germany  
2 / 94 92 4-0 • eMail: info@ATS-EDV-Service.de  
-Service.de [www.ATS-Bildershop.de](http://www.ATS-Bildershop.de)

**Aquatic Art Prints**

and was greeted by the usual blank looks and complete lack of interest in what for me felt like a world cup winning goal. In my dreams I often experience great moments of success but get the same muted response from my family – maybe I need a new hobby.

Fortunately, I have a Facebook family to fall back on who are far more interested in breeding accounts of LBJs, so the customary blurry image of an unidentified fish in a cave with a bright yellow mass was posted and followed by a ripple of applause around the globe providing all the encouragement and satisfaction I need to continue.

Despite the lack of *Hypostomus* breeding accounts, the smaller species of the genus don't appear to be particularly challenging. I don't know any other fishkeepers who admit to keeping a group of LBJ *Hypostomus* with a view to breeding them – probably the reason for the absence of reported spawnings.

My spawning was relatively small, with 32 fry emerging after 5 days of incubation. I spotted them spilling out of the cave on hatching so intervened and emptied them into a hatching tub. After 24 hours, a third of the fry had succumbed unfortunately died, leaving 20 larvae that soon developed into young fish and eventually miniature replicas of the adults.

Next stop for me is to consider spawning a second species of *Hypostomus*; I've seen *H. flaveolus* available in UK fish shops and will have a closer look next time I visit the store. In the meantime, if any of you know of half a dozen adult *H. luteus* free to a good home, let me know!

### References

- Konn-Vetterlein, D. and M. Hardman. 2015. The true identity of *Hypostomus plecostomus* (Linnaeus 1758). *Journal of the Catfish Study Group* 16 (3): 7–10.  
Evers, H.-G. 2012. Fish Room Tour. *Amazonas* 1 (3): 98–99.  
Evers, H.-G, and I. Seidel. 2005. *Wels Atlas Band 2*. Mergus Verlag GmbH.



---

## 19<sup>th</sup> ANNUAL CSG OPEN SHOW...

**Sunday 16th September 2018**

**Derwent Hall, George Street  
DARWEN, Lancs BB3 0DQ**

Benching: 10.30 am – 12.30 pm

Judging: 1.00 pm

Public viewing from: 12.30 pm

No entry fees

Prizes and place cards for all classes

*Any questions, call Brian Walsh on 01254 776567*

## ... and AQUATIC AUCTION

**FREE ENTRY**

**CSG Sales Commission 15%**

Booking in from 10.30 am – Start 1.00 pm

Book your lot by email [chairman@catfishstudygroup.org](mailto:chairman@catfishstudygroup.org) or via [CSG Facebook page](#)

## **CATFISH STUDY GROUP OPEN SHOW RULES**

### **Submission of an entry implies acceptance of all of the rules.**

1. Fish will be judged to Catfish Study Group Show Size Guide
2. Fish will be exhibited in clear, flat-sided containers, the smallest of which will be 100mm x 100mm x 100mm. Jars will not be accepted. Exhibitors are requested to label their show tank with the Latin and/or Common name of the fish.
3. Gravel/Sand is allowed. Aeration may be used.
4. Show tanks must be of sufficient size to allow fish to swim and turn. Exhibitors may be disqualified if the fish is poorly presented, in poor or cramped conditions. Fish will not be fed on the show bench.
5. Breeders teams will consist of four fish, minimum age three months, maximum 15 months. Date of hatching and name of species must be shown on tanks.
6. Entries may not be moved, or interfered with once judging has commenced, except by order of the Judges or the Show Secretary.
7. Debenching is not allowed until the Show Secretary makes the announcement, except by prior arrangement with him.
8. The show organisers reserve the right to re-bench any fish into their appropriate class.
9. Photography of entries will be permitted after judging is completed.
10. Time will be allocated to allow viewing of the judges' decisions.
11. The Judges decisions are final. Judging sheets will be displayed in the hall.
12. Any complaints, comments, etc., should be directed to the Show Secretary.
13. No prohibited fish can be displayed or sold at CSG events e.g., Ictaluridae, *Tachysurus*, *Siluris glanis*.

---

*Whilst every care will be taken, the Catfish Study Group will not be held responsible for the loss of or damage to fish, equipment, or persons.*

## On the identity and validity of *Callichthis punctatus* Valenciennes, 1834

By Steven Grant



Fig 1. Illustration of *Callichthis punctatus* Valenciennes 1834. Credit: Creative Commons.

Alcide d'Orbigny travelled to South America between 1826 and 1833. He visited several countries and brought or sent back thousands of specimens to France, some of which were deposited in the Muséum national d'Histoire naturelle in Paris (MNHN).

Coloured plates of some of the fishes were published 1834–1839 with scientific names provided by Achille Valenciennes but with no additional information. Plate 5 was published in 1834 (Sherborn & Griffin, 1934) and figure 1 of the plate was labelled *Callichthis punctatus*. The purpose of this article is to determine the validity of this name and the species to which it applies.

### Generic placement

The original description (Valenciennes, 1834) gave the generic name as *Callichthis*. In later accounts by Valenciennes (1840, 1847<sup>1</sup>) he spells the genus as *Callichthys*. The accepted spelling of Scopoli's 1777 genus is *Callichthys*. Based on this information I consider that *Callichthis* is an

incorrect subsequent spelling of *Callichthys* (article 33.3 ICZN).

Valenciennes (1840, 1847) considered it to be the same as *Cataphractus punctatus* Bloch, 1794, which is currently in the genus *Corydoras* Lacepède, 1803 *sensu lato*. It is clear from the drawing of the holotype and the information provided by Valenciennes that the species is a member of the subfamily Corydoradinae, tribe Corydoradini. What is not so clear is whether it and Bloch's species (i.e., *Cataphractus punctatus*) are members of the genus *Corydoras sensu stricto* and, if not, whether they are even congeneric. This has an impact on the validity of the Valenciennes species (i.e., *Callichthis punctatus*), as well as others, and will be discussed later.

### Type specimen(s) and locality

As the plate (Valenciennes, 1834) gave no information other than the scientific name, it wasn't until six years later that information about the origin and number of specimens used to describe the species was provided (Valenciennes, 1840).

<sup>1</sup> In 1847 Valenciennes incorrectly states that "*Callichthys punctatus*" was figure 3 on Plate 5. It was figure 1.

It is clear from Valenciennes (1840) that several specimens were received from d'Orbigny as he states that he had specimens from two and a half to three "pouces" (a pouce corresponds to approximately one inch, or 2.5cm). However, the specimen in the plate is the holotype by monotypy as the name is first made available as a labelled plate in 1834 based on one specimen with only a name provided (article 73.1.2 ICZN). The MNHN holds a number of d'Orbigny specimens and the author has checked the MNHN database but could not locate any specimens that correspond to the specimens supplied by d'Orbigny and discussed by Valenciennes (1840). Other authors, notably Nijssen & Isbrücker (1967 & 1980), have also been unable to find any specimens. It is therefore the author's opinion that the holotype and topotype specimens of d'Orbigny must be considered lost. It is not certain that the holotype was one of the specimens sent to and discussed by Valenciennes (1840) but Valenciennes states that d'Orbigny sent the specimens in 1827 so it is likely, and Valenciennes states that he has 'provided a good figure of it' in the published plate.

Valenciennes (1840) clearly states that the d'Orbigny specimens were from Montevideo (in Uruguay); and d'Orbigny's journal of his travels describe that he visited "la république orientale de l'Uruguay". Although the type locality was not made clear in the original description in 1834, as per the subsequent information on the origin of the holotype (the specimen in the plate) and article 76.1 of the ICZN, the type locality is Montevideo.

#### *Identity, correct usage and validity of the species*

In the author's opinion the drawing of the holotype (Fig. 1) shows a species that appears similar to *Corydoras paleatus* (Jenyns, 1842).

Eigenmann & Eigenmann (1888, 1890, 1891) considered *C. punctatus* Valenciennes and *C. marmoratus* Steindachner to be junior synonyms of *C. paleatus* Jenyns, and in 1890 they said they had three specimens from

Uruguay. In their 1890 paper, they incorrectly date the description of *C. punctatus* Valenciennes as 1840 and 1847, again, not realising that the name was available from the publication of the plate in 1834, or not realising the publication date of the plate was distinct from the 1840 and 1847 publications. Van der Stigchel (1946) followed their synonymy.

When discussing the description of *C. punctatus* Valenciennes, Nijssen & Isbrücker (1967:23 & 1980:192) said "It is of little importance, but the fish listed by him actually should be identified as *Corydoras paleatus* (Jenyns, 1842)" (1980). Nijssen & Isbrücker did not realise that the date of Valenciennes's description was actually 1834 (date the plate was published) not 1840 or 1847, and in 1980 they decided that *C. maculatus* Steindachner, 1879 was a *nomen novum* for *C. punctatus* Valenciennes based on their view of the homonymy with *C. punctatus* Bloch, so were probably basing their statement of "little importance" on the fact that Steindachner's replacement name was predated by Jenyns's description of *Callichthys paleatus*. If *Callichthys punctatus* is actually conspecific with *Callichthys paleatus*, then without taking into account the issue of homonymy (discussed below) the latter (i.e., *paleatus*) is a junior synonym of the former (i.e., *punctatus*). *Corydoras paleatus* has occurred in numerous scientific works over the years, was described based on Darwin's famous expedition aboard The Beagle, is an iconic species, and its validity is important to the nomenclature and taxonomy of the Corydoradinae.

*Corydoras paleatus* was described on the basis of five specimens, only three of which have been traced (Nijssen & Isbrücker, 1980). Jenyns (1842) states that the exact locality in which Darwin obtained the specimens was uncertain because the labels had become unattached. Tencatt et al. (2016) stated "there are no concrete evidences that lead to the exact type-locality where Darwin may have collected *C. paleatus*, but it is more likely that this species has been collected in Uruguay and not in Argentina" and that it is possible that the type



Fig. 2. *Corydoras paleatus* collected in Salinas, near Montevideo (Uruguay). Photo: H.-G. Evers.

specimens came from “Laguna del Diario, a lake which supplies the city of Maldonado”.

Laguna del Diario is just over 100km from Montevideo (the type locality of *C. punctatus* Valenciennes) and Tencatt et al. (2016) list several specimens they identify as *C. paleatus* from different locations in Montevideo. Fig. 2 is a specimen caught by Hans Evers from Salinas, which is close to Montevideo. So, one can assume it is present in Montevideo, and they list no other species from there, but do list the similar looking *C. longipinnis* Knaack, 2007 from other parts of Uruguay.

Tencatt et al. (2016) did not follow the synonymy of Nijssen & Isbrücker (1980) with regards to *C. punctatus* of Valenciennes, based on their view that the pattern shown on the drawing did not match that of *C. paleatus*. Incidentally, they also stated that *C. punctatus* Valenciennes dated from 1840, whereas it is available from 1834, for the reasons discussed above.

The drawing of the holotype of *C. punctatus* Valenciennes (Fig. 1) does present some possible differences to live *C. paleatus*, but there are numerous similarities. These similarities

become much more striking when one reads the description of the d’Orbigny topotypes and possible holotype (roughly translated) from Valenciennes (1840) “brown-reddish with some blackish clouds on the back, greenish on the flanks, and reddish under the belly. Its dorsal is reddish, bordered by a large black band; There are traces of blackish points on the last rays. The caudal has four black vertical strips, and a very-pronounced black triangular spot on the basis of the adjoining rays; There is a large long black band on the anal, whose background is yellowish and dotted with blackish. We also see blackish on a part of the pectorals and a dark dot on the adipose. The ventrals are yellow.” This description can apply to some specimens of *C. paleatus* and fits almost exactly with that of a live specimen of *C. paleatus* (Tencatt et al. 2016: reproduced here as Fig. 3) from the possible type locality of *C. paleatus*, with the exception of the absence vs. presence of dark marks on the ventral fin. The longitudinal dark line along the flanks is not actually mentioned by Valenciennes (1840) but in any case, in some specimens of *C. paleatus* show a dark, almost continuous band along the midline of the body, usually only interrupted in one or two places by iridophores or fewer melanophores (Fig. 4). Fig. 5 (photographed by the late Felipe Cantera) is of a



Fig. 3. *Corydoras paleatus* collected in Laguna del Diario, Maldonado (Uruguay). Photo: H.-G. Evers.

specimen from “Aguas Blancas” in Uruguay, which is ca. 80km north east of Montevideo. It shows a specimen with an almost complete dark lateral mark across the midline of the body, and a fragmented line across the distal margin of the dorsal fin. The specimen from Salinas (Fig. 2) has the more common broken line. Wild specimens of unknown origin show an almost complete line in the male.



Fig. 4. *Corydoras paleatus*, aquarium specimen of unknown origin. Photo: S. Grant.

Tencatt et al. (2016) who examined the lectotype and photographs of other type specimens of *C. paleatus*, give a diagnostic morphological character that differentiates *C. paleatus* from other similarly patterned and geographically clustered species: “by the presence of perpendicularly directed serrations along entire posterior margin of the pectoral

spines (vs. serrations directed towards pectoral spine origin; serrations directed towards pectoral-spine tip; perpendicularly directed serrations, if present, bifid or restricted to proximal region of pectoral spine)”. Although the holotype of *C. punctatus* of Valenciennes is lost, in 1840 a description of some of the d’Orbigny specimens was provided and it states (roughly translated) “finely denticulated internally, and so that its teeth are directed towards the tip.” If this is correct and *if* it applies to the holotype, then this may mean that *C. paleatus* and *C. punctatus* of Valenciennes are not synonymous, but there is room for error here on work conducted in 1840 or earlier.



Fig. 5. *Corydoras paleatus* collected in Aguas Blancas, ca. 80km from Montevideo (Uruguay). Photo: F. Cantera.

However, the locality and the colour and pattern do match, whereas it does not match species in the wider region with similar pattern and morphology e.g. *C. longipinnis* Knaack,

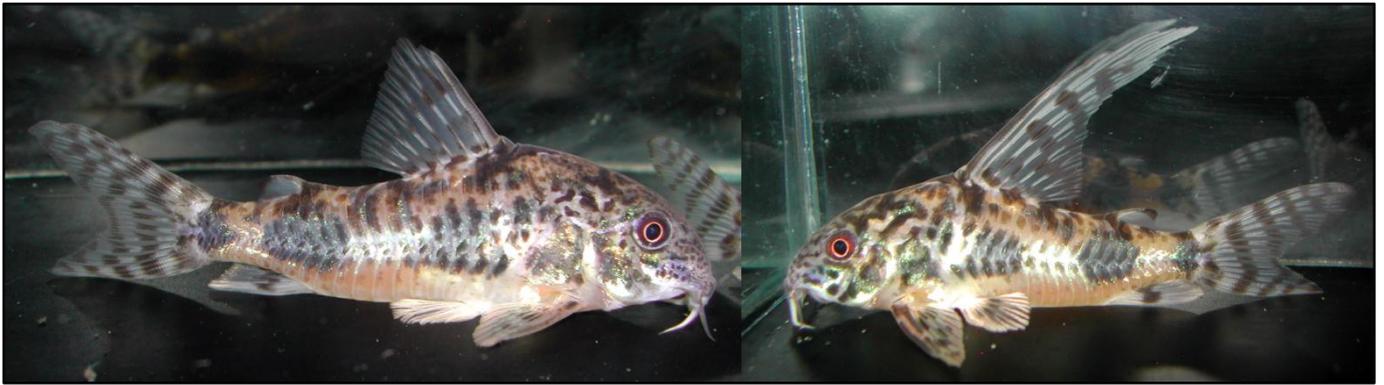


Fig. 6. Female (left) and male (right) *Corydoras longipinnis*, unknown origin. Photos: S. Grant.

2007 (Fig. 6); *C. steindachneri* Isbrücker & Nijssen, 1973; *C. gryphus* Tencatt et al., 2014 (Fig. 7) ; *C. lymnades* Tencatt et al., 2013; *C. ehrhardti* Steindachner, 1910 (Fig. 8). The drawing of the holotype could be interpreted as representing different morphotypes or lineages *sensu* Alexandrou et al. (2011) due to the nature of the eye and snout. The only other known species from Uruguay are *C. hastatus* Eigenmann & Eigenmann, 1888; *C. aeneus* (Gill, 1858)<sup>2</sup>; and *C. undulatus* Regan, 1912. In the author's opinion none of these species are even close to the pattern in the original description or Valenciennes (1840). As discussed earlier, *C. longipinnis* is a species very similar to *C. paleatus* but never shows a complete or almost complete line along the flanks.



Fig. 7. *Corydoras gryphus* CW24. Photo: S. Grant.

*C. carlae* Nijssen & Isbrücker, 1983 and to a lesser extent *C. froehlichii* Tencatt et al., 2016 do match, particularly the clear ventral fin and pectoral fin serrations, but these species are only known from restricted areas in the Rio Iguazu and upper Rio Uruguai basins, respectively, some distance from the known distribution of *C.*

<sup>2</sup> But probably not that species, but a coded one which may later prove to be an undescribed different species.

*paleatus* (Tencatt et al., 2016). Only *C. paleatus* is known from Montevideo.

Based on all the information above, the author considers that *C. paleatus* is conspecific with *C. punctatus* Valenciennes, 1834. As the holotype of *C. punctatus* Valenciennes is lost, and the confused history of the identity of this species, a neotype designation could help to resolve some of the synonymy issues, particularly if a neotype was also the same specimen as the lectotype of *C. paleatus* or one of the Uruguayan *C. marmoratus* paralectotypes. An alternative would be one of the ZVC Montevideo specimens listed in Tencatt et al. (2016). However, no neotype designation is made here.

#### Homonymy with *C. punctatus* (Bloch, 1794)

Bloch's species was originally described in *Cataphractus* and Valenciennes's in *Callichthys* (not *Callichthis* - article 11.9.3.2 ICZN), therefore they were only secondary homonyms when both were placed in *Callichthys* by Valenciennes (1840) and Günther (1864), or in *Corydoras* by Steindachner (1879a).

Valenciennes (1840 and 1847) considered his own 1834 species as conspecific with *C. punctatus* Bloch so did not need to provide a replacement name.

Günther (1864) did not provide a replacement name.

Steindachner (1879a) published "*Corydoras maculatus* Steind. = *Coryd. (Collichthys) punctatus* Valenc. partim, nec. Bloch. - La Plata". This paper was an abstract of a much more detailed paper published shortly



Fig. 8. *Corydoras ehrhardti*, unknown origin. Photo: S. Grant.

afterwards (Steindachner, 1879b). Every single new species described in 1879a was also described in 1879b, with two exceptions: *Hypoptopoma carinatum* was described in 1879b but was not in 1879a, and *Corydoras maculatus* did not appear in 1879b, but what did appear instead was *Corydoras marmoratus*. The part of 1879b that contains *C. marmoratus* is entitled “About some new and rare fish species from the La Plata” which appears to refer to La Plata river, rather than just the city of the same name in Argentina. Steindachner stated that he had ten specimens (all of which are in museums in Austria and the Netherlands). The specimens were said to be from Montevideo and La Plata (city) within the province of Buenos Aires. He states that they were received under the name *Callichthys punctatus* sp. Bloch but he goes on to say why they are not the same species as Bloch’s (from Surinam) so (roughly translated) says “I intend to designate as *Corydoras marmoratus* for the time being.” After describing the colour pattern and morphology he states (roughly translated) “The specimen depicted in d’Orbigny’s Atlas is probably a seldom occurring variety of *Corydoras marmoratus* m., in which the large spots are missing along the centre of the body; By the way, this figure (at least as far as the body drawing is concerned) certainly does not seem to have succeeded, as Valenciennes expressly emphasizes, for there are neither the cloud spots on the back hinted at, which still describes Valenciennes itself, nor the shape of the head and the dorsal could also be faithfully represented.”

Nijssen & Isbrücker (1980) considered that Steindachner (1879a) proposed *Corydoras maculatus* as a new name (*nomen novum*) for “*Corydoras (Collichthys) punctatus* of Valenciennes. partim, nec. Bloch”, and that

“This name was given for the second specimen (from “Monté-Vidéo”) described as *Callichthys punctatus* by Valenciennes (in Cuvier & Valenciennes, 1840; it was recorded and illustrated by Valenciennes (in d’Orbigny, 1847). This specimen could not be traced.” Apart from the date of the description being 1834 and not 1840, I agree with this statement, that due to the secondary homonymy with Bloch’s species and Steindachner having the ten specimens to prove this, that he was providing a replacement name, despite him not using the term *nom. nov.* or a similar wording. This would mean that as per article 72.7 of the ICZN, *C. punctatus* Valenciennes and *C. maculatus* Steindachner would have the same type specimen (even though it is lost).

Tencatt et al. (2016) state that “The specimen described by Valenciennes (1840) was referred as *Corydoras punctatus* var. *argentina* in Steindachner (1879a), assigned as *nomen nudum* in the synonymy of *C. marmoratus* (see Nijssen & Isbrücker, 1980: 204). After that, *C. maculatus* was proposed as a *nomen novum* for *Corydoras punctatus* var. *argentina* in Steindachner (1879b)”. This swaps the publication dates around to what Nijssen & Isbrücker (1980) stated and this author has checked both Steindachner publications and it is clear that the abstract was published before the larger paper so Nijssen & Isbrücker (1980) were correct when they said *Corydoras maculatus* was proposed first, and *Corydoras marmoratus* was published afterwards.

The issue of the different species name used in 1879b (*marmoratus* instead of the earlier name *maculatus*) is certainly confusing. It is not known whether the abstract contained an error of what was to come later (in naming the species *maculatus* rather than *marmoratus*) but the wording under the name *C. marmoratus* states “Syn. *Callichthys punctatus* Valenc., C. V. Hist. nat. des Poiss. Vol XV, p.318 part.; d’Orbigny, Voyage dans l’Amer. merid., Poiss. Pl. V, Fig. 3, var. (nec Bloch)” and the wording in the translated text above appear to be consistent with it being the same taxon as the earlier described *C. maculatus*. Steindachner also states “n. sp. ?” after the name *C. marmoratus*. As per article 11.5.1 of the ICZN this in itself should not

invalidate the name. Nijssen & Isbrücker (1980) selected one of the Buenos Aires specimens as the lectotype. Tencatt et al. (2016) found that the lectotype and the majority of paralectotypes were conspecific with *C. paleatus*. If *C. marmoratus* was a replacement name it actually has the same type specimen as that of *C. punctatus* Valenciennes, 1834 in the absence of a neotype designation, despite any designation or statement to the contrary (article 72.7 ICZN).

In view of the above this author considers that:

*Corydoras maculatus* Steindachner, 1879 is a replacement name for *Callichthis punctatus* Valenciennes, 1834 due to, at the time, the latter being a junior homonym of *Cataphractus punctatus* Bloch, 1794. If the author is wrong in this assessment, then *C. maculatus* is a junior synonym of *C. punctatus* Valenciennes, 1834.

*Corydoras marmoratus* Steindachner, 1879 is at most an unnecessary replacement name for *C. punctatus* Valenciennes, 1834, or an incorrect subsequent spelling of *C. maculatus*, or at the least a junior synonym of *C. paleatus*.

*Corydoras maculatus* is a junior synonym of *Corydoras paleatus* (Jenyns, 1842) by way of the principle of priority.

*Corydoras punctatus* as listed by Hyrtl (1859) – refers to *Ossancora punctata* (Kner, 1855) as stated by Eigenmann & Eigenmann (1890) and Nijssen & Isbrücker (1967).

Based on the lack of information in the original descriptions, no known type specimens, and of other siluriforms (including Callichthyinae) being present in Uruguay, the author considers that *Silurus quadricostatus* Larrañaga, 1923 and *Silurus septemradiatus* Larrañaga, 1923 are *nomina dubia*.

*Corydoras punctatus* var. *argentina* Steindachner, 1879b is a *nomen nudum* (Nijssen & Isbrücker, 1980).

*Generic placement of Callichthis punctatus / Corydoras maculatus*

The generic placement of *C. punctatus* Valenciennes, 1834 (= *C. maculatus*

Steindachner, 1879) may seem unimportant bearing in mind *C. paleatus* Jenyns, 1842 predates the replacement name *C. maculatus* and therefore *C. paleatus* can be used to represent both taxa and has been since at least 1888. However, article 59.3 of the ICZN states that “A junior secondary homonym replaced before 1961 is permanently invalid unless the substitute name is not in use and the relevant taxa are no longer considered congeneric, in which case the junior homonym is not to be rejected on grounds of that replacement.”

Currently, *C. paleatus* and *C. punctatus* Bloch are both placed in *Corydoras*. However, Britto (2003) presented a phylogeny that confirmed the paraphyly of *Corydoras* with most species grouped into nine clades, and *Brochis* Cope, 1871 was placed in its synonymy in order to maintain the monophyly of *Corydoras*. Alexandrou et al. (2011) and Alexandrou & Taylor (2011) also support the paraphyly of *Corydoras* with six lineages, based on that would currently reside within *Corydoras*, once *Aspidoras* Ihering, 1907 and *Scleromystax* Günther, 1864 are removed.

Of the lineages in *Corydoras sensu* Alexandrou et al. (2011), *C. punctatus* Bloch would be in lineage 9, *C. punctatus* Valenciennes/*C. maculatus* Steindachner, 1879 in lineage 6. The type species of *Corydoras* is *C. geoffroy* Lacepède, 1803, which in the phylogeny was found to be the basal lineage and was named lineage 1. It is clear from the results and from the work of Vera-Alcaraz (2013) that to resolve the paraphyly of *Corydoras*, lineages 4–9 need to be removed from *Corydoras* which would undoubtedly revalidate some or all of the generic names below:

*Hoplisoma* Swainson, 1838 for lineage 9, type species *C. punctatus* Bloch, 1794

*Gastrodermus* Cope, 1878 for lineage 5, type species *C. elegans* Steindachner 1876

*Microcorydoras* Myers, 1953 for lineage 4, type species *C. hastatus* Eigenmann & Eigenmann, 1888

*Osteogaster* Cope, 1894 for lineage 7, type species *C. eques* Steindachner 1876

*Brochis* Cope, 1871 is within lineage 8 but this lineage needs further work to see if the other species historically not included within that genus require their own generic name.

There is no genus name to house lineage 6.

According to Tencatt & Ohara (2016) lineages 6 and 9 “are both characterized mainly by (I) the presence of a short mesethmoid; (II) posterior margin of the pectoral fin spine with serrations generally directed towards the tip of the spine; (III) infraorbital 1 generally with poorly to moderately developed ventral laminar expansion; and (IV) infraorbital 2 generally not contacting compound pterotic.” And state that “Despite both lineages sharing some general external morphology, Alexandrou et al. (2011) and Vera-Alcaraz (2013) found evidence that these two clades do not form a monophyletic group.” In the phylogeny of Alexandrou et al. (2011) lineage 6 was not found to be closely related to lineage 9, actually being more closely related to lineage 1, or true *Corydoras*. Vera-Alcaraz (2013) presented a comprehensive phylogenetic hypothesis based on morphological and molecular data, proposing a '*C. paleatus* clade', which included *C. cochui*, *C. diphyes*, *C. ehrhardti*, *C. flaveolus*, *C. longipinnis*, *C. nattereri* and *C. tukano*, albeit within *Hoplisoma*. Tencatt et al. (2016) hypothesised that *C. lymnades* Tencatt et al. (2013) and *C. froehlichii* Tencatt et al. (2016) would also belong in this clade. *C. steindachneri* Isbrücker & Nijssen, 1973 (if valid) would also belong in this clade. Vera-Alcaraz's solely morphological based phylogeny recovered lineage 6 within *Hoplisoma*, despite his own evidence that it may not be monophyletic group.

Based on the evidence of Alexandrou et al. (2011), Alexandrou & Taylor (2011) and Vera-Alcaraz (2013 – not including the outcome of lineage 6 in *Hoplisoma*) it is the author's view that *Callichthys punctatus* Valenciennes, 1834 (or its replacement name *C. maculatus*, or the senior synonym of *C. maculatus*: *C. paleatus*) is no longer congeneric with *Cataphractus punctatus*, Bloch 1794, as the latter is hereby considered within the genus *Hoplisoma* (and is the type) and the former is not. The author does not consider that lineage 6 species belong in

*Hoplisoma* on the basis of the morphological and molecular evidence provided by the authors above, and on the basis of the shared colour pattern which is not found in *Hoplisoma*. In view of the closer phylogenetic relationship with *Corydoras*, *C. punctatus* Valenciennes, 1834 (and its *nomina nova* and *C. paleatus*) are hereby retained in *Corydoras* pending further study.

Under article 59.3 of the ICZN, *C. punctatus* Valenciennes, 1834 is not permanently invalid and should no longer be rejected in favour of its replacement name(s) as it was replaced before 1961 and the replacement name *C. maculatus* (and *C. marmoratus* if that too is a *nomen novum*) have not been used as valid names since at least 1888, i.e., they are not in current usage.

As the author considers *C. punctatus* Valenciennes, 1834 to be a valid name it would be a senior synonym of *C. paleatus* on the basis of the principle of priority. In accordance with article 23.9 of the ICZN as the senior synonym (*C. punctatus*) has not been used as valid after 1899 and the junior synonym (*C. paleatus*) has been used as its presumed valid name, in at least 25 works, published by at least 10 authors in the immediately preceding 50 years and encompassing a span of not less than 10 years, the author declares *C. punctatus* Valenciennes, 1834 as a *nomen oblitum* and *C. paleatus* Jenyns, 1842 as a *nomen protectum* as the valid name. This action is taken in accordance with article 23.9.2. Evidence that article 23.9.1.2 is met is provided in the works below, the full reference titles of which can be obtained from Eschmeyer et al. (2018).

Nijssen & Isbrücker 1980:204, Malabarba 1989:147, Burgess 1989:366, Gómez & Chebez 1996:62, Haro et al. 1996:6, Sverlij et al. 1998:64, Britski et al. 1999:126, Britto et al. 2002:735, Isbrücker 2001:232, Reis in Reis et al. 2003:301, López et al. 2003:43, Axenrot & Kullander 2003:265, Britto & Lima 2003:89, Shimabukuro-Dias et al. 2004:141, Menni 2004:82, Knaack 2007:23, Knaack 2007:23, Knaack 2007:36, Ferraris 2007:122, Calviño & Alonso 2010:200, Mabragaña et al. 2011:table S2, Tencatt et al. 2014:78, Tencatt et al. 2014:91, Fabiano et al. 2014:8, Litz & Koerber 2014:23,

Sarmiento et al. 2014:190, Mirande & Koerber 2015:40, Tencatt & Pavanelli 2015:294, Tencatt & Ohara 2016:[13], Tencatt & Evers 2016:[11], Tencatt et al. 2016:[3], Ottoni et al. 2016:133, Bertaco et al. 2016:416, Koerber & Litz 2016:5, Ni3n et al. 2016:31, Koerber et al. 2017:6, Koerber et al. 2017:7.

To the author's knowledge article 23.9.1.1 applies. All known relevant works after 1899 have been checked and the senior synonym does not appear as the valid name in any of them.

## Acknowledgements

Thank you to Luiz Tencatt for providing useful comments on the draft; to Hans-Georg Evers and the late Felipe Cantera for permission to reproduce their images.

## References

- Alexandrou, M. A., C. Oliveira, M. Maillard, R. A. R. McGill, J. Newton, S. Creer & M. I. Taylor. 2011. Competition and phylogeny determine community structure in M3llerian mimics. *Nature*, 469: 84-88
- Alexandrou, M. A. and M. I. Taylor, in Fuller & Evers, 2011. Evolution, Ecology and Taxonomy of the Corydoradinae Revisited. 104-117.
- Bleeker, P., 1864. Description des esp3ces de Silures de Suriname, conserv3es aux Mus3es de Leide et d'Amsterdam. *Natuurkundige Verhandelingen van de Hollandsche Maatschappij der Wetenschappen te Haarlem* (Ser. 2) v. 20: 1-104, Pls. 1-16.
- Bloch, M. E., 1794. Naturgeschichte der ausl3ndischen Fische. Berlin. v. 8: i-iv + 1-174, Pls. 361-396.
- Britto, M. R., 2003. Phylogeny of the subfamily Corydoradinae Hoedeman, 1952 (Siluriformes: Callichthyidae), with a definition of its genera. *Proceedings of the Academy of Natural Sciences of Philadelphia* v. 153: 119-154.
- Eigenmann, C. H. and R. S. Eigenmann, 1888. Preliminary notes on South American Nematognathi. I. *Proceedings of the California Academy of Sciences (Series 2)* v. 1 (pt 2): 119-172.
- Eigenmann, C. H. and R. S. Eigenmann, 1890. A revision of the South American Nematognathi or catfishes. *Occasional Papers California Academy of Sciences* No. 1: 1-508 + errata and map.
- Eigenmann, C. H. and R. S. Eigenmann, 1891. A catalogue of the fresh-water fishes of South America. *Proceedings of the United States National Museum* v. 14 (no. 842): 1-81.
- Ellis, M. D., 1913. The plated nematognaths. *Annals of the Carnegie Museum* v. 8 (nos 3-4) (art. 13): 384-413, Pls. 25-31.
- Eschmeyer, W. N. and R. Fricke, and R. van der Laan (eds). CATALOG OF FISHES: GENERA, SPECIES, REFERENCES. (<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>). Electronic version accessed 19 May 2018.
- Gosline, W. A., 1940. A revision of the neotropical catfishes of the family Callichthyidae. *Stanford Ichthyological Bulletin* v. 2 (no. 1): 1-29.
- G3nther, A., 1864. Catalogue of the fishes in the British Museum. Catalogue of the Physostomi, containing the families Siluridae, Characinae, Haplochitonidae, Sternoptychidae, Scopelidae, Stomiidae in the collection of the British Museum. v. 5: i-xxii + 1-455
- Jenyns, L., 1842. Fish. In: The zoology of the voyage of H. M. S. Beagle, under the command of Captain Fitzroy, R. N., during the years 1832 to 1836. London: Smith, Elder, and Co. Issued in 4 parts. i-xvi + 1-172, Pls. 1-29.
- Hyrtl, C. J., 1859. Anatomische Untersuchung des *Clarotes (Gonocephalus) heuglini* Kner. Mit einer Abbildung und einer osteologischen Tabelle der Siluroiden. *Denkschriften der Kaiserlichen Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Classe*. v. 16: 1-18, 1 pl.
- Knaack, J., 2007. Beitr3ge zur Kenntnis der Callichthyidae (Teleostei: Siluriformes). III. *Corydoras longipinnis* sp. n. -- ein neuer Panzerwels aus dem r3o Dulce in Argentinien (Teleostei: Siluriformes: Callichthyidae). *Vertebrate Zoology* v. 57 (no. 1): 35-55.
- Larra3aga, D. A., 1923. Escritos de Don D3maso Antonio Larra3aga. Los Publica el Instituto Hist3rico y Geogr3fico del Uruguay. Edici3n Nacional. v. 2: 1-512
- Nijssen, H. and I. J. H. Isbr3cker, 1967. Notes on the Guiana species of *Corydoras* Lac3p3de, 1803, with descriptions of seven new species and designation of a neotype for *Corydoras punctatus* (Bloch, 1794) -(Pisces, Cypriniformes, Callichthyidae). *Zoologische Mededelingen (Leiden)* v. 42 (no. 5): 21-50, Pls. 1-5.
- Nijssen, H. and I. J. H. Isbr3cker, 1980. A review of the genus *Corydoras* Lac3p3de, 1803 (Pisces, Siluriformes, Callichthyidae). *Bijdragen tot de Dierkunde* v. 50 (no. 1): 190-220.
- Nijssen, H. and I. J. H. Isbr3cker, 1983. Sept esp3ces nouvelles de poissons-chats cuirass3s du genre *Corydoras* Lac3p3de, 1803, de Guyane fran3aise, de Bolivie, d'Argentine, du Surinam et du Br3sil (Pisces, Siluriformes, Callichthyidae). *Revue fran3aise d'Aquariologie Herp3tologie* v. 10 (no. 3): 73-82.
- Regan, C. T., 1912. A revision of the South-American siluroid fishes of the genus *Corydoras*, with a list of the specimens in the British Museum (Natural History). *Annals and Magazine of Natural History (Series 8)* v. 10 (no. 56): 209-220.
- Sherborn, C. D. and F. J. Griffin, 1934. On the dates of publication of the natural history portions of Alcide d'Orbigny's 'Voyage Am3rique m3ridionale'. *Annals and Magazine of Natural History (Series 10)* v. 13 (no. 73, art. 9): 130-134.
- Steindachner, F., 1879a. 3ber einige neue und seltene Fischarten aus den zoologischen Museen zu Wien, Stuttgart und Warschau. *Anzeiger der Kaiserlichen Akademie der Wissenschaften, Wien, Mathematisch-Naturwissenschaftliche Classe* v. 16 (no. 4): 29-34.
- Steindachner, F., 1879b. 3ber einige neue und seltene Fisch-Arten aus den k. k. zoologischen Museum zu Wien, Stuttgart, und Warschau. *Denkschriften der Kaiserlichen Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Classe*. v. 41: 1-52, Pls. 1-9.
- Tencatt, L. F. C., M. R. Britto and C. S. Pavanelli, 2014a. A new long-finned *Corydoras* Lac3p3de, 1803 (Siluriformes: Callichthyidae) from the lower rio Paran3 basin, Brazil. *Neotropical Ichthyology* v. 12 (no. 1): 71-79.
- Tencatt, L. F. C., M. R. Britto and C. S. Pavanelli, 2014b. A new species of *Corydoras* Lac3p3de, 1803 (Siluriformes: Callichthyidae) from the upper rio Paran3 basin, Brazil. *Neotropical Ichthyology* v. 12 (no. 1): 89-96.
- Tencatt, L. F. C., M. R. Britto and C. S. Pavanelli, 2016. Revisionary study of the armored catfish *Corydoras paleatus* (Jenyns, 1842) (Siluriformes: Callichthyidae) over 180 years after its discovery by Darwin, with description of a new species. *Neotropical Ichthyology* v. 14 (no. 1) e150089: [1-20] 75-94.
- Tencatt, L. F. C. and W. M. Ohara, 2016. Two new species of *Corydoras* Lac3p3de, 1803 (Siluriformes: Callichthyidae) from the rio Madeira basin, Brazil. *Neotropical Ichthyology* v. 14 (no. 1) e150063: [1-16] 139-154.
- Valenciennes, A., 1834. Poissons [plates]. In: A. d'Orbigny. Voyage dans l'Am3rique m3ridionale. Pl. 5

Valenciennes, in Cuvier, G. and A. Valenciennes, 1840. Histoire naturelle des poissons. Tome quinzisième. Suite du livre dix-septième. Siluroïdes. v. 15: i-xxxii + 1-540, Pls. 421-455.

Valenciennes, A., 1847. Poissons. Catalogue des principales espèces de poissons, rapportées de l'Amérique méridionale. In: A. d'Orbigny. Voyage dans l'Amérique méridionale. P. Bertrand, Paris and V. Levrault, Strasbourg. v. 5 (art. 2): 1-11

Van der Stigchel, J. W. R., 1946. The South American Nematognathi of the Museums at Leiden and Amsterdam. Leiden. 1-204, Tables 1-3.

Vera-Alcaraz, H. S. 2013. Relações filogenéticas das espécies da família Callichthyidae (Ostariophysi, Siluriformes). Unpublished Ph.D. Dissertation, Pontificia Universidade Católica do Rio Grande do Sul, Porto Alegre, 362 pp.



*Corydoras longipinnis*, male collected in Paso de Pache, Canalones, Uruguay. Photo: S. Grant.



*Microglanis cottoides* (Gareth Savage, Castleford AS) 2017 Best in Show 2017 at the CSG Annual Open Show and Auction. Photo: G. Savage.

## Sustainable Ornamental Fisheries

By Mark Walters



Aquarium fish awaiting sale in an Asian market. Photo: Creative Commons.

As a responsible aquarist I regularly challenge myself about my hobby and the impact it has on the fish I keep. Not just their immediate welfare in a captive environment but the sustainability of wild-fish populations.

To help balance my impact on populations in their natural habitat, I endeavour to acquire captive bred fish wherever possible and then attempt to breed fish to help sustain them in the hobby – thus reducing my reliance on wild caught fish.

I'm not relying on accurate statistics here, but it is widely argued that for every fish that makes it to a hobbyists tank, many will die following capture, holding, transit or in the shop they are ultimately purchased from, especially for marine species. In addition, the impact of collecting techniques on the habitat (which may include the use of poisons) is poorly understood but may also have lasting effects on non-target species and the stability of the local community itself.

Fish get less publicity with respect to their welfare when compared to more visible mammals, birds and reptiles, but they are facing similar threats to their survival. The most impactful pressures on fish populations are not necessarily collection for the aquarium trade but

development associated with mining, agriculture, urban sprawl and hydroelectric power generation.

Thankfully, for many aquarium species, the aquatic trade has very little impact and countless millions of aquarium favourites such as cardinal tetras have been collected over the last 60 years in a responsible and sustainable way that has employed several generations of aquarium fish collectors and exporters.

In fact there are few, if any, cases of fish whose status has been significantly threatened due to ornamental fishing pressure. A couple of examples including denison's barb, the galaxy rasbora and the red-tailed black shark spring to mind. The relative lack of impact doesn't provide an excuse to carry on and exploit fish populations without consideration and as responsible aquarists we should do what we can to minimise the risk to wild populations.

The collection of species which are already under pressure from other factors could be enough to cause their permanent loss from the wild, e.g., Xingu plecos of the Volta Grande. It might be convenient to blame other direct factors for causing their extinction but the collection of what could be the last remnants of a



*Sahyadria denisonii* Photo: Creative Commons.

population from the wild could be what ultimately confines the species to history.

It seems that for fish collection of rarer species there is a reliance on the local knowledge of fishermen. For obvious reasons, collection localities are a closely-guarded secret to ensure that the populations can be collected in a sustainable way and are not exploited by more unscrupulous commercial interests.

Sustainability does not just extend to ensuring that the fish are not over-collected, but also to limiting the impact on the habitat and remaining population. Hence, the use of poisons or other destructive methods is limited and strongly discouraged.

Of course, the more that rare species are publicised and their value increases, pressure mounts to collect them and if the location is revealed, a 'gold-rush' can kick in. The race to get as many individuals as quickly as possible leads to unsustainable collection and potentially the destruction of the habitat and loss of the species. For some species with a very restricted range (as was the case for the galaxy rasbora), this could result in virtual extinction of the species.



*Hypancistrus zebra* Photo: Creative Commons.

It seems hard to fathom how local fishermen in a remote part of Asia or South America, for example, are so in tune with the fishkeeping habits and desires of Europe, North America and Asia. Quite simply, the internet and social media provide real-time information concerning the price and demand for certain species across the globe.

Understandably, they will want to exploit the most valuable species as much as anyone, and will use whatever means are at their disposal. The information they feed off includes reports from forums, websites, fish stores, online sales, private sales and fish club sales. The increase in eco-tourism and regular description of new species pinpoints the once-secret locations and habitats of desirable fish and not surprisingly the collectors move in.

For some species this does not pose a real problem, they may be widely distributed or only seasonal in their occurrence with youngsters being inaccessible to collectors. For other species of limited geographic range, the sudden identity of their narrow band of existence can be fatal to their existence in the wild.

In addition, the impact on their delicate habitat and associated fauna can be equally devastating. I have come across reports recently of species which have become very popular in the hobby being fished out of existence, on publication of their locality, potentially resulting in their local extinction.

I can't see how the situation can become much better in the future, although we can all do our bit by embracing some responsible guidelines:

- source fish from breeders
- keep species established in the hobby and clearly sustainable in the future trade
- avoid keeping species which are known to be threatened in the wild
- do not seek to buy wild-caught fish of species that are banned for export from their host country or subject to international restrictions on trade

- avoid publicising the precise location of newly-discovered species, or keep the location as vague as possible

At the end of the day, we all want to continue

to enjoy our hobby as much as we can, and contribute to the understanding of aquarium fish. Sustainability is a key factor to ensure the future existence of species, and something we can all be a part of.



Cast-net fisherman in Sri Lanka. Photo: Creative Commons.

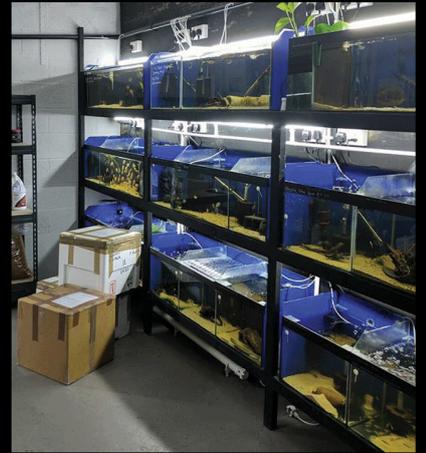


<i>Date</i>	<i>Event</i>	<i>Location</i>
16 September	Open show and auction	Derwent Hall, Darwen BD3 0DQ
21 October	CSG @ BlåPlaneten	Copenhagen, Denmark
18 November	Autumn auction	Derwent Hall, Darwen BD3 0DQ
9 December	Christmas meeting	Derwent Hall, Darwen BD3 0DQ

More information at [catfishstudygroup.org](http://catfishstudygroup.org) and on [Facebook](#)



Moss Lane  
Newcastle  
Staffs ST5 5EQ  
07852 777705



[countrysideaquatics.com](http://countrysideaquatics.com)





# G.B.W

## Products & Services



**High Class Joinery  
Furniture  
Wood Carvings  
Commissions Undertaken**

### Contact

**Brian Walsh**

**Tel: (01254) 776567**

**Mob: 07977 428 788**

**Email: [g.b.w@live.co.uk](mailto:g.b.w@live.co.uk)**

