The Journal of the Catfish Study Group

Convention 2010

Brachyrhamdia

Corydoras sp. CW037

Spring auction

Aspidoras albater
Catfish Study Group Committee

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Diary Dates - 2010

Jun 20th Topic - Catfish health
Meeting cancelled
July 18th Topic - The dietary needs of catfish
Summer Lecture – ‘The Genetics of Ornamental Fish’ – Dr. David Price & Mini Auction
Aug 15th Auction limited to 5 lots. Pre booking David Barton 01942 248130
Sep 19th Open Show & Auction
35 Catfish classes
Oct 17th Topic - Favourite catfish
Auction pre booking David Barton 01942 248130
Nov 21st Autumn Auction
Pre booking David Barton 01942 248130
Dec 12th Christmas meeting
Details to be announced

All meetings are normally held at the Highfields Working Men’s Club, 1 Ratcliffe Street, Darwen, Lancashire, BB3 2BZ on the third Sunday of each Month from 1pm
Contents

Editorial and Notices ................................................................. 3
Brachyrhamdia – Steven Grant ..................................................... 4
Convention 2010 ........................................................................ 17
Aspidoras albater – Adrian Taylor ............................................... 22
2010 Open Show – Schedule ...................................................... 24
Corydoras sp ‘CW037’ – Erik Schiller ......................................... 26
Spring Auction ............................................................................ 28
What’s New – Mark Walters ......................................................... 29
Show Rules .................................................................................. 33

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Editorial
Mark Walters

Welcome to the latest issue of the Catfish Study Group journal and my first as Editor. I was pleased to be accepted by the committee to take on the role in March and I hope you enjoy the articles and some of the changes I have incorporated.

In the future, the cover will feature images relevant to the issue. The quality of paper for the cover and the rest of the journal has been improved. We have also taken receipt of a new laser colour printer which should reduce some of the delays we have had which affected quality and release. The last printer did not do auto duplex or collation – resulting in significant effort to pull each journal together. Finally, there are more images of more catfish for you to enjoy! If you have any comments on the new look, please feed them through the forum on our website.

I am lucky coming into the job for the April issue considering the abundance of copy. The March convention was a great success (as always) and we have plenty of images to remind you of the event. Our Spring auction was one of the best ever with record receipts and numbers of lots. I have also been asking for specific articles from individuals resulting in some informative pieces. I have put on hold articles from Michael Hardman and David Marshall for future journals.

German aquarist Erik Schiller has provided a great article on some new Corydoras species and UK amateur ichthyologist Steve Grant has pulled together what must be the most comprehensive overview of the mimic catfish Brachyrhamdia. The fantastic photos in Steve’s article are credited to a number of CSG members.

Considering the requirements for my new role, there have been a few organisational changes. I have handed the baton for Breeders Award Programme management to Adrian Taylor. To support Adrian’s other duties, Mike O’Sullivan has taken on the role of Deputy Secretary. I hope members will continue to support the BAP programme with reports and articles. This month Adrian has provided a great account of his success with another Aspidoras species.

For me, breeding success has been limited in recent months. I have moved a few species around which has resulted in my Scleromyistax barbatus and S. kronei spawning again. I’ve been trying in vain to get Pecolitia sp ‘L134’ – leopard frog plecs, to spawn and have recently been attempting my ‘flash panaqules’ (L204). I did get some eggs from another panaquolous species (L169) but the male kicked them out. It’s starting to warm up in the fish house, the space heater was switched off early April and now the door is open on an evening!

Mark

In Memory

It was with deep regret that in February 2010 we heard of the death of Mrs Morris, the mother of our former Chairman and President Trevor Morris.

Mrs Morris, for many years, could be found in the group’s canteen serving teas, coffee and pastry’s. Upon the group’s relocation to Darwen from Aspull a few years ago, Mrs Morris decided to retire from the canteen due to health reasons; although she continued attending meetings in Darwen with her family for some time after and remained a loyal supporter of the Catfish Study Group.

Our sympathies go out to Mr. Morris, Trevor and all of the family.
Brachyrhamdia Myers, 1927
(Siluriformes: Heptapteridae)

Steven Grant

B. marthae dominant male – Steven Grant

Brachyrhamdia catfish have been appearing in the hobby intermittently for some years. The introduction of a few undescribed species recently prompted me to write this article as an introduction to this genus of beautiful dwarf heptapterids.

Familial Placement

Firstly, why is this genus referred to as being in Heptapteridae rather than Pimelodidae, the family it has traditionally been included in?

Since Lundberg & McDade (1986) there has been a generally accepted view that Pimelodidae as it stood did not accurately represent the relationships of the genera that were included.

See Shibatta (2003) for a historical overview of the phylogenetic works covering the issue.

Recently Sullivan et al (2006) also provided phylogenetic evidence for the basis for Heptapteridae being a valid family.

Thus this genus and many others formerly classed as pimelodids are currently deemed as heptapterids.

The basis for Brachyrhamdia as a genus

Myers described Brachyrhamdia for his new species B. imitator Myers, 1927. He appears to have mainly based the new genus on the “compact, somewhat compressed and deep” body.

Sands & Black (1985) also mention the apparent deeper body, and although Lundberg & McDade (1986) agree that Brachyrhamdia appears to have a deeper body they were not satisfied that this in itself warranted a different genus.

In fact Brachyrhamdia means ‘short Rhamdia’ from the Greek word for ‘short’: brakhús.

The other characters mentioned by Myers, and Sands & Black were shown not to be unique to Brachyrhamdia. Lundberg & McDade did find

1 The study of evolutionary relatedness through the use of molecular data and/or very detailed morphological comparisons. A cladogram or ‘family tree’ is usually created from the results to show the evolutionary relationships.
some differences in bony processes of the fourth and fifth vertebrae and they kept *Brachyrhamdia* as a separate genus.

After that *Brachyrhamdia* has been synonymised by some authors with *Pimelodella* Eigenmann & Eigenmann, 1888, and also with *Rhamdia* Bleeker, 1858 (Zarske, 2003).

Bockmann & Miquelarena (2008) provided a phylogenetic analysis of Heptapteridae using detailed morphology and this supported *Brachyrhamdia* as a valid genus.

It also showed that *Brachyrhamdia* and *Pimelodella* are closely related, and that *Brachyrhamdia* was near the base of the family tree in terms of its evolutionary development.

The phylogenetic differences relied on for separating *Brachyrhamdia* and *Pimelodella* from *Rhamdia* and *Rhamdella* was that in the first two mentioned genera the supraoccipital process meets the nuchal plate, and the eye is proportionately larger in the head length.

These two characters were seen as being an early evolutionary development in the family. In two *Rhamdella* species the eyes were larger but this was viewed as a 'reversal'.

I understand that this means a change back towards a physical characteristic of an earlier relative in the evolution.

So for example the earlier evolved *Brachyrhamdia* has larger eyes than genera that evolved later such as *Rhamdella*, but then some *Rhamdella* species evolved the other way and developed a larger eye than their closer relatives.

I understand that a full phylogenetic analysis of *Brachyrhamdia* is underway, so we will know more soon about the relationships of the species within the genus. For aquarists the easiest ways to distinguish the genera are:

1. In *Pimelodella* the posterior fontanel is long and wide (fig. 1)  
2. In *Brachyrhamdia* it is a small foramen (fig. which is not always visible on live specimens.

**Fig. 1.** Elongated posterior fontanel (pf) of *Pimelodella* (from Bockmann & Miquelarena, 2008)

![Image](image1.png)

**Fig. 2.** Posterior fontanel is a foramen in *Brachyrhamdia* (from Lundberg & McDade, 1986). Figure on left is the dorsal view of the neurocranium.

In *Rhamdia* and *Rhamdella* the supraoccipital process does not meet the nuchal plate (see fig. 3) – in *Brachyrhamdia* it does² (see fig. 2).

² In the specimens of *B. marthae* that Zarkse (2003) examined he said the supraoccipital process did not meet the nuchal plate. In all species that I have (including *B. marthae*) the supraoccipital process does meet the nuchal plate, so I am unsure why it does not in Zarske's specimens.
The Species

**Brachyrhamdia heteropleura**
(Eigenmann, 1912)

Etymology: Greek for 'different' héteros and Latin for 'ribs' pleuro.

This species is distributed in the Coratijn, Essequibo and Negro River basins; in Guyana, Suriname and northern Brazil (Bockmann & Guazzelli in Reis et al. 2003). It has also been caught by aquarists in the Rio Branco and Rio Jatapu in Brazil. It has appeared in the hobby, but very rarely.

I haven't seen photographs of any live or preserved specimens other than the one on Planet Catfish which does appear to match most of the drawing in the original description, apart from the lack of pigment around the post cleithral process.³

**Brachyrhamdia imitator**
(Myers, 1927)

Etymology: Latin for mimic 'imitator'.

This species is distributed in the Caura River basin in Orinoco River drainage, Venezuela.

³ Sometimes called the humeral process. In this genus it is a small thin bony process on the body, pointing backwards, situated just above the pectoral fin spine when it is clamped to the body.
B. imitator juvenile – Steven Grant

Brachyrhamdia marthae Sands & Black, 1985

Etymology: named after Martha Sands.

This species is distributed in Juruá and Mamoré/Madeira River basins in Brazil, Bolivia and Peru (Bockmann & Guazzelli in Reis et al. 2003).

This is the second most common species in the hobby. I noticed that when two males were kept together, the dominant fish had a much more violet tinge to the body colour and blacker markings (see images on title page and below).

B. marthae subordinate male – Steven Grant

Brachyrhamdia meesi Sands & Black, 1985

Etymology: named after Gerlof Fokko Mees.

This species is distributed in the Amazon River basin, Brazil (Bockmann & Guazzelli in Reis et al. 2003).

This is the most common species in the hobby. It can appear a silvery colour with a dark midlateral body band, and a dark vertical eye band.

However some specimens can also get a purplish base colour and black pigmentation to the upper portion of the dorsal fin rays and/or the area around the post cleithral process (see images). B. meesi can be separated from B. marthae by the lack of an eye band in B. marthae.

B. meesi – Alan James

Brachyrhamdia rambaranni (Axelrod & Burgess, 1987)

Etymology: named after Harry Rambarran.

This species is distributed in the Unini River basin in upper Negro River drainage, Brazil (Bockmann & Guazzelli in Reis et al. 2003).

B. rambaranni – Julian Dignall

I have only seen this species in the hobby on one occasion since its description.

Brachyrhamdia sp. 1

This species is currently being described. I first noticed it on a now defunct Peruvian fish website at the beginning of 2009. In October 2009 specimens were imported into the UK from Colombia and after Mike Kirkham’s photographs were published on Planet Catfish it was given the name sp. 1.

B. 'sp.1'male – Steven Grant
I am aware of the true locality of this fish but as it is being described I will not divulge the information.

**Brachyrhamdia sp. 2**

This undescribed species appeared in the hobby a couple of years ago. Its origin is unknown to me but based on its colour/pattern and the probable model(s) it mimics I would guess that it also comes from the Rio Negro, Brazil.

Following my submission to Planet Catfish it was given the name sp. 2. It is sometimes incorrectly identified as *B. rambarrani* but that species has the black lines across all the ridge of the back instead of just being confined to underneath the dorsal fin area.

This is actually a better mimic of *C. burgessi* than *B. rambarrani.*

**Brachyrhamdia sp. 3**

This species has recently been designated the name sp. 3. The adult specimens were exported from Colombia but their true origins are unknown.

They appear similar to *B. heteropleura* but appear to have black pigment in different areas on the fins, and none around the post cleithral process area. They may well turn out to be adult *B. heteropleura.*

**Mimicry**

Since the description of *Brachyrhamdia* and the species name of 'imitator' given to its type species there has been an association with mimicry. The type specimens of *B. imitator* were collected with *Corydoras melanistius* Regan, 1912, a catfish it shares a very similar pattern and size with.

In 1980 and 1984, Sands discussed the possibility of *Brachyrhamdia* mimicking *Corydoras* by shoaling with them, in effort to benefit by predators avoiding them, due to the armoured bodies of *Corydoras* and their ability to lock their dorsal and pectoral fin spines in place as a defence mechanism against predation.

With the description of the two new species in 1985, which didn’t appear to just mimic *Corydoras* but also a small loricariid and another heptapterid, Sands also suggested that it could be a “cryptic or zoomimesis” attempt to blend in with other fishes for greater shoaling protection.

He later (1990) hypothesised that some species may mimic *Corydoras* to steal eggs or food.
One basis for these views was the hypothesis that in the wild the *Brachyrhamdia* would be outnumbered by the catfish they were mimicking, as they usually came in as small volume by-catches with shoals of other catfish.

Some of the specimens used by Lundberg & McDade were also collected syntopically with *C. melanistius*, as well as another 3 species. Lundberg & McDade noted a large school of *Brachyrhamdia* in Venezuela, and their occasional proximity to individuals of *Corydoras*. Note that that individuals or the school were not schooling mixed in with the *Corydoras*.

As mentioned above, *B. imitator* is said to mimic *C. melanistius* but also *C. brevirostris* Fraser-Brunner, 1947 and *C. delphax* Nijsen & Isbrucker, 1983.

*B. rambarrani* was collected from the same river as *C. burgessi* Axelrod, 1987 and has a similar appearance, although it is probably closer to *C. adolfoi* Burgess, 1982, *C. duplicareus* Sands, 1995, *C. imitator* Nijsen & Isbrucker, 1983, and *C. serratus* Sands, 1995 in terms of pattern.
Sands (1990) states that *B. rambarrani* has also been imported with the similar *C. davidsandsi* Black, 1987. *C. nijsseni* Sands, 1989 is another similar species.

All those 7 species of *Corydoras* come from the same river system (Upper Rio Negro, Brazil) as *B. rambarrani* so it could mimic any or all of them.

Another *Corydoras* mimic appears to be *B. sp. 1*. This has a resemblance to *C. urucu* Britto, Wosiacki & Montag, 2009, *C. arcuatus* Elwin, 1938, and *C. narcissus* Nijsen & Isbrucker, 1980 (as well as several apparently undescribed species – see Fuller & Evers, 2005).

Mike Kirkham's *B. sp. 1* are housed with about 30 *C. cf. arcuatus* and do shoal with them, albeit Mike has noticed that as the *Corydoras* move, the *Brachyhamdia* seem to get left behind and then catch up.

When viewed from above they look very similar, and you can only really tell them apart
by the faint ridges of the scutes in the Corydoras.

Sands (1985) stated that B. marthae was being imported for many years amongst Corydoras pygmaeus Knaack, 1966 but also with a hypoptopomatine loricarid: Otocinclus Cope, 1871, which appears to be O. vestitus Cope, 1872.

B. marthae does have a similar appearance to both these catfish, and to back this up, my two specimens came in as by-catches with a large group of Otocinclus cf. vestitus.

Dorsal view of B. 'sp.1' and C. cf arcuatus – Mike Kirkham

Mike’s fish do not appear to be fully grown. My B. sp 1 are housed with C. gossei Nijssen, 1972 and they do not shoal or associate with them.

B. sp. 2 also appears to mimic similar Corydoras species to B. rambarrani, but is probably closer to C. burgessi and some of the pattern variants of C. nijsseni.

So, what do B. marthae, B. meesi, B. heteropleura, and B. sp. 3 mimic?

B. marthae

Sands (1985) stated that B. marthae was being imported for many years amongst Corydoras pygmaeus Knaack, 1966 but also with a hypoptopomatine loricarid: Otocinclus Cope, 1871, which appears to be O. vestitus Cope, 1872.

B. marthae does have a similar appearance to both these catfish, and to back this up, my two specimens came in as by-catches with a large group of Otocinclus cf. vestitus.

Otocinclus vestitus – Mike Noren

The two specimens were small, about the same length as the almost fully grown Otocinclus.

As the B. marthae have grown in length and body depth, they would stand out easily from the smaller Otocinclus, albeit they still share a similar pattern, but with slightly different colours.

My B. marthae are in with B. sp 1 and C. gossei. They do not shoal or associate with the C. gossei (in fact they can be aggressive towards them).

Mimicry between a Corydoras and Otocinclus species has already been documented (Axenrot & Kullander, 2003); could B. marthae be mimicking two different genera, which may also be mimicking each other at some stage in their life cycle?

Sands (1985) stated that B. meesi had been imported with what he identified as Pimelodella lateristriga (Lichtenstein, 1823), but this identity is not certain.

I know that recently B. meesi has been imported in numbers in its own right, rather than as by-catches. These specimens were not small but about half grown.
B. heteropleura and B. sp. 3 are similar looking to B. marthae and B. meesi. It is not known what B. heteropleura and B. sp. 3 mimic but it is my hypothesis that they also mimic small Corydoras and/or young Pimelodella.

Based on its distribution there are various species B. heteropleura could mimic. Ingo Seidel has informed me that it comes in as a by-catch with Corydoras kanei Grant, 1997, from the Rio Branco Brazil.

Although it does not appear too similar to that species so may not be actually mimicking it. Ingo caught B. heteropleura in the Rio Jatapu in Brazil along with two Corydoras species: CW30 and CW46. Out of those two B. heteropleura is similar to CW030 so may mimic that species.

It could also mimic C. griseus Holly, 1940 as that species is known to be present in the Essequibo.

Based on what I have gleaned from the information and observations above, it is my opinion that in the wild Brachyramdia species shoal with other similar patterned genera when they are young and small and thus the slight differences in pattern, colour and shape are not as noticeable in the immature fish.

As they mature and grow and thus the differences in adult size, shape, pattern and colour become more obvious and thus more so to predators, my hypothesis is that they will leave the shoal of other genera and group together with their own species, although they may still occur syntopically with the model.

The only information I can find to potentially disprove this is that Morris (1984) observed B. imitator shoal with C. melanistius and C. brevirostris and spawn shortly after the C. brevirostris did, although it may well be that in the wild mature Brachyramdia shoal with or near their model and spawn at similar times, the observations in Lundberg & McDade seem to back this up.
If my hypothesis is the case, is this actual mimicry, and if so which and what is its actual purpose? I follow Randall's (2005) definition of the difference between mimicry and crypsis / zoomimesis, or protective resemblance as he called it. His study was based on fishes, albeit marine ones. His definition, slightly adapted by me for freshwater fishes, is:

‘Protective resemblance is used for fishes that closely resemble a part of a substrate, a plant, or a sedentary animal. Mimicry applies only to fishes that resemble active animals. In addition to resemblance in colour and morphology, the mimic may adopt a pattern of behaviour to enhance the deception.’

Therefore *Brachyrhamdia* are mimics in my opinion.

There are different forms of mimicry, depending on the reason for it. It appears to be a form of defensive mimicry. Although some *Brachyrhamdia* can be aggressive to *Corydoras*, I do not think they are biting fins for nutrition, or stealing eggs. I think that they are shoaling with them when young for defensive purposes, and as they get older and do not need the mimicry they become aggressive towards them. This is partly backed up by an observation by Morris (1984) who noticed *B. imitator* to be shy and hide on their own, but when *C. melanistus* were introduced they would shoal with them, but nip the fins of *C. aeneus* (Gill, 1858) and drive them out of the shoal.

The two forms of mimicry relevant here are Batesian and Müllerian.

In Batesian mimicry the mimic (*Brachyrhamdia*) shares the shares signals similar to the model (*Corydoras, Otocinclus, Pimelodella*), but does not have the attribute that makes it unprofitable to predators (e.g. unpalatability, which would be the armoured body of *Corydoras*). Batesian mimics are less likely to be found out when in low proportion to their model. In Müllerian mimicry two or more species have very similar warning signals and both share genuine anti-predation attributes (e.g. being unpalatable).

So, in *Brachyrhamdia* is the ‘warning signal’ the similar colour/pattern to that of the model species, which we assume the predator associates with some form of unpalatability in the model species?

The model species discussed here don’t seem to us to have overtly aposematic colours/patterns, when compared to poisonous/venomous animals such as poison arrow frogs, coral snakes etc. However, the pattern/colour may give a warning signal to the predator, if not to us humans, as it is not probably a warning of venom, but of the model being difficult to eat due to armour, fin spines etc (unpalatability), although we know that many catfish have some form of mild venom.

But if this is the case, why would *Brachyrhamdia* apparently mimic another heptaperid, *Pimelodella*, which assumedly only has similar unpalatable characteristics - lockable dorsal and pectoral fin spines? It may well be that *Pimelodella* are more noxious to eat, or that the species that mimic *Corydoras* and *Otocinclus* are Batesian mimics, and the ones that mimic *Pimelodella* Müllerian mimics. Field studies could hopefully clear this up although this would be difficult, and perhaps as difficult as trying to reproduce the life cycle of these fishes as well as their models in an aquarium setting. This leads me onto the breeding of *Brachyrhamdia*.

**Breeding**

There has only been one written account of spawning that I am aware of. Morris (1984) reported spawning of *B. imitator* following the spawning of *C. brevirostris*, although the eggs were infertile. The text of the behaviour is quoted here (via www.scotcat.com):

> "The water in the aquarium was around the 6.6 pH mark, hardness unknown, but local tapwater is quite soft. The first species to actually spawn was the *C. brevirostris* they chose to use the glass sides of the tank to site their eggs."

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1 Aposematism (from apo- away, and semantic sign/meaning), perhaps most commonly known in the context of warning colouration, describes a family of antipredator adaptations where a warning signal is associated with the unprofitability of a prey item to potential predators. It is one form of "advertising" signal, with many others existing, such as the bright colours of flowers which lure pollinators. The warning signal may take the form of conspicuous colours, sounds, noxious taste, odours or other perceivable characteristics. Aposematic signals are beneficial for both the predator and prey, who both avoid potential harm.

2 When *Brachyrhamdia* are caught in a net they are able to move the pectoral fin to produce stridulation noises and vibrations – personal observations.
During the spawning act the Brachyrhamdia became highly active with the three smaller male specimens chasing the larger plumper females round into the clump of densely planted Vallisneria which, in this 15in. deep tank reached to the surface. Two pairs went through the motions of spawning amongst the Vallisneria. Observations of the actual act were made difficult by the speed of the actual spawning runs, but a side by side method was employed.

Many small transparent eggs were produced which adhered to the plant leaves. However, these proved to be infertile. Size was smaller than the average Corydoras egg but this was made up for in the larger numbers produced. The trigger factor seemed to be the spawning of the Corydoras (the sexual emissions from them, milt, etc.) but further study will see if this is true.

Based on examination of dissected specimens Lundberg & McDade hypothesised that breeding was seasonal, and not at the time the specimens were caught (January and early February).

They suggested that they may breed near or at peak high water season. If this is the case one may be able to induce spawning by raising the water level and cooling the water. B. imitator, B. rambaranni, and B. sp. 2 may need to have the water conditions similar to their blackwater habitat, so soft, acidic water, and wood and leaves may help.

In terms of sexing Brachyrhamdia I would agree that females will probably be noticeably plumper and deeper bodied than males, but this can be misleading as they can be greedy eaters and become very fat. There should be some differences in the vent, which is the case in some other catfish. The only information I can find on heptapterid external sexual dimorphism is that of Pimelodella boschmai Van der Stigchel, 1964.

According to Van der Stigchel both male and female of that species have a genital papilla, but in the male it was well developed, conical, long, and further from the vent, and in the female it was short, thicker, and closer to the vent. I have looked at specimens of B. imitator (1), B. marthae (2), B. meesi (1), B. sp. 1 (4) and B. sp. 2 (1). All these, apart from the B. imitator appear to have a genital papilla. In the more mature or larger B. marthae and B. sp. 2 the urogenital area is swollen and there appears to be a papilla.

B. marthae genital papilla

In the B. marthae it is pointed, in the larger B. sp. 2 it is thin and tube-like.

B. sp. 2 genital papilla

In the less mature and smaller B. sp. 1, and B. meesi the urogenital area does not appear swollen, but a small thin pointed papilla can be seen. In one of the images of B. sp. 3 one specimen appears to have a swollen urogenital area, but no papilla. Therefore it is my opinion that Brachyrhamdia have external sexual dimorphism - the males have a small papilla, the females do not.

Anyone lucky enough to have a sexed group of one or more of the species should try a spawning project with these fish. It will be interesting to see if they will spawn without their model, and how they behave without it during their life cycle. A comparison of with and without the model would be even better.

Aquarium care

From my limited experience with these catfish they appear to be generally quite hardy. They
will eat tablet, frozen, and live foods often voraciously. They will accept temperatures in the range of 75-79°F, ph 6.2-7.5 (although the lower ph may lead to fin erosion, so I would suggest 6.5 as the lowest).

One should provide plenty of cover such as plants, pipes, bogwood, caves etc but if you are keeping them with their model, which would be ideal, I would also provide some shoaling space. I advise sand as the substrate rather than gravel, as it appears that this is the natural substrate in the wild. Lundberg & McDade noted that when trying to evade capture by the collectors they dived into the sand. They will eat fish small enough to fit in their mouths, and some species can be aggressive towards Corydoras, although this may mainly be to those that they don’t mimic.

I have noticed in my B. marthae that the dominant specimen of the two males has much more distinct and deeper colouration that the subordinate male.

Acknowledgements

Thanks to Julian Dignall, Hans-Georg Evers, Ian Fuller, Ingo Seidel, Mike Kirkham, Allan James, Mark Smith, and Mike Noren for the use of their images, and any information provided.

References


Corydoras World www.corydorasworld.com

Eigenmann, C. H., 1912. The freshwater fishes of British Guiana, including a study of the ecological grouping of species, and the relation of the fauna of the plateau to that of the lowlands.


Planet Catfish www.planetcatfish.com


ScoT Cat www.scotcat.com


CATFISH STUDY GROUP
SUMMER LECTURE

SUNDAY 15th AUGUST 2010

GENETICS OF ORNAMENTAL FISHES

by Dr David Price
Senior Lecturer in Genetics
School of Biomedical & Biological Sciences
University of Plymouth.

Venue:
Highfields Working Men’s Club,
Ratcliff Street,
Darwen, Lanc’s.
BB3 2DF.
Doors open 12.00 noon
(To be followed by a limited lot ‘short’ auction).
Convention 2010
Mark Walters

This year our Convention was held on the 5th, 6th and 7th March in the seaside town of Southport, UK, in the prestigious Prince of Wales Hotel.

Delegates started arriving on the Friday evening to find much of the arrangements for the convention in place, thanks to the hard working convention committee.

Exhibitors were busy setting up their stands including the Anabantoid Association of Great Britain (pictured below),

The British Livebearer Association, British Cichlid association (fantastic live exhibit, Vieja argentea, pictured below), Killifish association, Cichlid Press also set up specialist stands.

Tetra (pictured below), Aquarian and Mark Breeze (live food guru) provided trade displays.

The CSG had its own displays with merchandise and of course the Breeders Award Programme display.

This year we made arrangements for bespoke display tanks to be available for BAP participants to exhibit their successes. The equipment (pictured below) was funded by the CSG and CorydorasWorld.com

The BAP display generated a fantastic amount of interest over the weekend with 11 groups of tank bred catfish from at least 7 genera on display.

The exhibit included some species of unknown identity providing a challenge for some of the expert delegates to crack. Thankfully Ingo Seidel and Ian Fuller provided the answers.
What had been widely regarded in the hobby as Ancistrus sp. 'L144' (pictured below, exhibited by the Editor) are not now regarded to be this species, but another unknown species (not a xanthic form of the common A. cf. cirrhus).

Similarly a group of Hypancistrus displayed by Danny Blundell, thought to be H. sp. 'L04' ('angelicus ancistrus') was identified as H. sp. 'L136b' (shown below).

Keepers of this species will be pleased to have pinned down the identification of this fish!

Speakers

As has been the norm over the last few years we had speakers from far and wide. Worldwide expert on Loricariidae and good friend of the CSG, Ingo Seidel; Dr. Michael Hardman, known for many catfish articles and his latest scientific work on the Bullheads of North America; Markos Alexandrou from Bangor University in Wales; and plant expert Claus Christensen from Denmark. Michael, Markos and Claus are pictured below.
We had our very own Secretary, Adrian Taylor on the Friday night with a presentation on his favourite moth cats. Adrian (pictured below) was also hard at work manning the merchandise stand.

Trophy keepsakes, carved impeccably by our Show Secretary Brian Walsh were presented to each speaker in turn. Brian is pictured hard at work on his display stand.

I have captured some of the detail from one of Ingo’s fantastic lectures – It would be a particularly difficult task to document all the nuggets of information given. At the end of the day the convention is best experienced live – we could never do it justice through this journal.

**Ingo Seidel – Catfishes of Suriname**

For much of Ingo’s Suriname presentation (Ingo pictured with Ian Fuller), the audience was stunned into silence by images of unseen catfish. The country is not regularly visited by commercial collectors yet has an enviable list of endemic species.

Many of the rarer species are shipped off to Japan, where they command a premium. Corydoras are a particular favourite for collectors and slides of species such as *C. baderi, C. filamentosa, C. nanus, C. bicolor* were shown. All of these species are extremely rare in the hobby – or unknown in some cases.

Suriname close to the equator and is still heavily forested (80%), meaning that there is plenty of pristine habitat. Ingo took us on a journey along the Rio Tapanahony (26.5C,
pH 6, < 1kH) where Corydoras were caught along the sandbanks including C. sp. 'Palumeu' (cf. heteromorphus with a rounded snout – since assigned code CW047). Also caught were Microgianis poecilus and the ubiquitous Callichthys. In the rapids of the Suriname River were found Hartia guianensis – very specialised algae grazers needing high oxygen concentrations, Hypostomus gymnorrhynchus, Pimelodus ornatus.

In the lower Suriname River (Gran Rio) at Awarradam were found Corydoras boesmani, again on the sandbanks, at 28°C and a pH of 6.6. Also caught were the lipbrooding Metaloricaria paucidens and Hypoptopomatidae species. In the rapids there were plenty of grazing loricarids including Hypostomus micromaculatus, H. surinamensis, Guyanancistrus cf. brevispinosis, Pseudancistrus depressus with fine 1cm bristles around the mouth and Hartia surinamensis upto 30cm in length. The heavily armoured Creniloricaria maculata (different to Hartia which have no ventral plates) was also found. In feeder streams were discovered true Corydoras punctatus and more C. boesmani.

Even warmer (32°C, pH 6.5) was the Coppename River where in Spari Creek were discovered Corydoras brevirostris and another new Corydoras the colour of C. aeneus but in the elegans group – C. sp. 'spari creek' (now coded as CW048).

Other species captured included the real Hypostomus plecostomus, Ancistrus temmincki and Trachelyopterus galeatus. The talk concluded with accounts of brackish water catfish species encountered at the mouth of the Suriname River.

Extra Curricular Activities

No CSG convention would be complete without the after hours debates discussions and diatribes and this year was no exception. Well lubricated with fine wine and good beer, new friendships were made and issues (catfish related) resolved!

A few images are shown below.

Following presentations to all speakers the weekend was drawn to a conclusion at about 5.30 on the Sunday night by our President, Ian Fuller, whose hard work alongside the committee and helpers has not gone unnoticed and again they rose to the occasion to make it another successful Convention.

Plans have already been made for the next convention – see the advert in this issue. See you all in March 2011!

Thanks must also be given to our sponsors who you can view at:
http://catfishstudygroup.org/core/convention_sponsors.htm

All photos by Mark Walters and Danny Blundell.
CSG Convention 2011

The date for the CSG's 2011 Convention has now been set for: - 18th - 19th - 20th March

The venue is totally new and should meet with everyone's approval, it is The Kilhey Court Hotel, Chorley Road, Standish, Wigan, Lanc's. WN1 2XN. This is a superb four star hotel with enough room to cater for our every need. The conference room holds up to 300 people.

See map below and directions, or goto: http://www.catfishstudygroup.org/core/find_us.htm

Because this is a relatively small hotel with a total of 62 rooms, bookings will be on a first come first served basis and those that book their tickets early will get discount. Booking forms will be available as soon as everything has been settled and checked. Please check back to the CSG website for upcoming information. Or contact the Convention Manager – Ian Fuller.
Having acquired quite a nice pair of these small Corydoradinae species unexpectedly, I hurried around my fish room trying to find a tank that I could utilise. I decided that some *Akysis prashadi* that I had in a small tank on their own, could be moved into another larger tank that contained a mixture of fish; and thus giving me room into which I could house the Aspidoras.

The tank itself was 400mm x 160mm x 160mm and filtered via a ‘hamburg matten filter’, and had a sand substrate. I removed 75% of the water in the tank and refilled with a mixture of RO water and rainwater, which was at the ambient temperature of the fish room, which is space heated.

I gradually introduced the pair of *Aspidoras albater*. This involved placing the catfish into a container and gradually adding water taken out of the prepared tank over a few hours, and into which I added a clump of java moss, and released the pair. Over the next few weeks I lightly fed these on a mixture of grindal worm and commercially prepared tablet feed. After a couple of weeks I noticed that the female was looking slightly more plump and the male seemed to be a bit more bright in its colouration and was also showing more interest in the female.

I then added a nylon spawning mop to one corner of the tank, positioned at the water line and was opposite from the filter. Water changes were increased from 20% every 6th day to 30% every 3rd day; and I added into their diet live Cyclops which were to be found in one of my water butts. Like most of the other members of this genera spawning took place during the hours of darkness a few days later.

Ten eggs which were clear with a hint of brown in colour; were found in amongst the nylon spawning mop and these were removed into a small plastic container, aerated, and left to hatch.

The water parameters at the time of finding the eggs were as follows: Temperature 23°C, pH 6, dGH 5 and with a water conductivity of 130µS cm. The eggs hatched some 24hrs later with the fry taking a further 24hrs to absorb their yolk sac and become free swimming.

The fry was then fed upon a mixture of infusoria and marine invert food; twice daily, with 50% water changes to the fry container carried out each evening.

After 7 days the fry were photographed and moved on to a small growing on tank that had a sand substrate, and which contained a small sponge filter and a small clump of}

**Aspidoras albater. Female left, male right**

**java fern.**
The fry were fed upon a diet of newly hatched brine shrimp, powdered flake and milliworms. Water changes were carried out on the fry tank at a rate of 30% every third day for the first month and then subsequently I reduced the water changes to 30% every 6th day.
CATFISH STUDY GROUP

19 SEPTEMBER 2010

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OPEN SHOW

Catfish Classes Only

Benching from 10.30 - Judging 13.00
Show Secretary: Brian 01254 776567

AUCTION

Normal Entry Rules Apply
Any fish other than painted accepted;
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[If unsure of the rules ask when booking in]

CSG Commission 15%

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Catfish Study Group Show Schedule - Classes

1. Aspidoras
2. Brochis
3. Corydoras group A - up to 55 mm SL (females)
4. Corydoras group B - over 55 mm SL (females)
5. Corydoras Types - C-numbers and unidentified*
6. Scleromystax
7. AOV Callichthyidae - Calichthys; Dianema; Hoplosternum; Megalechis; Leptoplosternum.
8. Aspredinidae
9. Auchenipteridae
11. Doradidae
12. Loricariidae - Up to 130 mm SL
13. Loricariidae - Over 130 mm SL
14. Loricariidae - L & LDA numbers up to 130 mm SL[i]
15. Loricariidae - L & LDA numbers over 130 MM SL[i]
16. Mochokidae - Up to 130 mm SL
17. Mochokidae - Over 130 mm SL
18. Pimelodidae - Up to 100 mm SL
19. Pimelodidae - Over 100 mm SL
20. AOV Cold water Catfish [ii]
21. AOV Catfish - South American
22. AOV Catfish - African
23. AOV Catfish - Asian
24. Pairs - Corydoradinae
25. Pairs - Loricariidae. Including L & LDA numbers
26. Pairs - AOV South American
27. Pairs - AOV African
28. Pairs - AOV Asian
29. Breeders - Corydoradinae
30. Breeders - Loricariidae, including L & LDA numbers
31. Breeders - AOV South American
32. Breeders - AOV African
33. Breeders - AOV Asian
34. Family Class - Pair & Breeders - Adults should be placed in their respective Pairs class and juveniles in their respective Breeders class, the points are added together and then divided by 2.
35. Breeders Master Class - 1 entry = 3 separate species of juvenile fish.

i. Corydoradinae and Loricariidae species with a L or LDA number that have been described or positively identified should be entered in the named species class.
ii. Because of current legislation we can only accept entries for the AOV Cold Water Catfish on production of a current valid licence.
Corydoras sp. CW37 - Pie courtesy of Marcus Hufgard

Corydoras sp. CW37 is a Corydoras species that resembles Corydoras punctatus from Surinam. This mailed catfish is depicted as Corydoras punctatus "Xingu" on one Japanese website. With its striking pattern of fine dots, covering the entire body and combining to form a fine longitudinal streak on the ventral surface, this is a very pretty mailed catfish. A striking black spot in the dorsal fin constitutes another distinguishing character.

Corydoras sp. CW037

Corydoras sp. "Uruara" - its name before it received a CW number – was first imported to Germany by Jens Gottwald of Garbsen. According to Herr Gottwald these catfishes were caught by his collectors in the Rio Uruara in the federal state of Para in Brazil. The Rio Uruara is a tributary of the Rio Curua Una, which in turn flows south into the Amazonas near Santarem. Marcus Hufgard acquired a group of these lovely mailed catfishes. After just one month these Corydoras spawned for Marcus, who has reported the following water parameters: 24 °C, 5 °dGH, 3 °dKH, and a pH of 6.5. He also reports that his adult fishes are confirmed egg-cannibals, and he usually manages to save only 15-20 eggs. I received ten of the first juveniles in summer 2008. These youngsters grew slowly but evenly.

Then, in December 2009, I found the first eggs on the aquarium glass. There were always 10-30 eggs collected per clutch, even with later spawnings. Only rarely were they found on plants; up to 90% were attached to the end glasses of the aquarium. The female invariably laid just two eggs per spawning pass. The size of the eggs was between that for Corydoras aeneus and that for Corydoras panda.

Hatching took place after four days at 23 °C, but the hatch rate was only around 50%. From an average of 20 eggs I was only ever able to rear 5-8 Corydoras sp. CW37. Not exactly the best of results and not at all the same as the data reported by Marcus Hufgard for wild-caught specimens.

Moreover an aquarist friend who also obtained tank-bred stocks from Marcus Hufgard had no better success, although his clutch sizes were
larger. In my opinion the poor fertilization rate and the losses during the development of the eggs are a function of the combination of water parameters.

During the first weeks the young fishes are very light in colour, with no markings, then slowly but surely more and more dots develop on the bodies of these catfishes. At 1 cm juveniles of Corydoras sp. CW37 exhibit the following body markings: lots of tiny dots all over the body, a small black spot on the upper third of the dorsal fin, and a faintly marked eye-stripe completes the appearance of the roughly 1 cm long youngsters.

A very rare Corydoras species from Surinam is very similar. Corydoras punctatus was described from the Brokopondo district. The dotting in this species is appreciably coarser than in Corydoras sp. CW37, plus C. punctatus has a broad band marking on the caudal fin. In Corydoras sp. CW37, by contrast, the numerous small dots produce a faint banding on the caudal fin.

In the aquarium trade several Corydoras species are often incorrectly offered for sale under the name Corydoras punctatus. These are usually members of the Corydoras agassizi and Corydoras schwartzi assemblage.

A further very similar species was brought back for me from Austria by an aquarist friend. This Corydoras was collected in French Guiana.

The collecting locality was the Rio Comte, south of the town of Cacao. The Rio Comte flows south from Cayenne into the Atlantic.

The local people term these catfishes Corydoras “bondi bondi”. According to the local fishermen this species is caught only in the Rio Comte. Like Corydoras bondi, this species, which I will here christen Corydoras sp. “Comte”, has a continuous mid-lateral stripe composed of dots and bordered by a light band.

Beneath this light line there are a very small number of small dots. The upper half of the body is covered in lots of dark dots. The caudal fin exhibits 6-7 longitudinal bands. The dorsal fin also has hints of 2-3 stripes, but no dark spot! The body shape of Corydoras sp. “Comte” is more thick-set than in Corydoras bondi (which comes from Venezuela) or Corydoras coppenamensis (a species from Surinam).

I have now been keeping this species for three years, but unfortunately despite spawning tubes being clearly visible, I have yet to persuade these Corydoras to actually spawn. All three species have one characteristic in common – they are all extremely shy. Only rarely are these Corydoras to be seen by day.

They spend most of their time beneath large roots, plants, and similar hiding-places. Only at twilight do they come out of their hiding-places and go looking for food, and even then at the least vibration they disappear again for a while. I keep all three species in aquaria with light sand and roots as hiding-places (these catfishes don’t lose their shyness even with a dark substrate). The temperature fluctuates between 23 and 25 °C and the pH is on average 7.0.

Unless assigned, all pictures courtesy of the author.

This article was first published on Corydorasworld.com
I have listed all catfish which went through the auction this March. It’s an impressive offering. Personally, I grabbed 6 Brochis splendens at £2 each, a Rhineloricaria lanceolata male and 4 green lazer Cory’s:


Brochis splendens, Megalechis thoracatum, Leptoplosternum pectorale,


Ancistrus cf. cirrhosus, A. sp. L144, A. sp. L182, Sturisomatiognathus sp. ‘columbianus’, Otolocicus cocama, O. vittata, Baryancistrus sp, Dekeyseria sp. L052, Sturisoma nigirostrum, Pseudancanthicus adonis,

Hara jerdoni, Amblydoras cf. hancocki, Neotropius atherinoides, Bunocephalus caracoides (pictured below), Pimelodella blochi, Synodontis polli, S. petricola, S. angelicus, S. nigrita, Rhamdia quelen.

All pics by Mark Walters.
This article presents information for five recently published scientific papers for which further details are available.

The following uncommon species, have been sighted: Amara/ia hypsiura, Scleromystax cf. lacerdai, S. prionotus, S. kronei, Brochis britskii, B. multiradiatus, Corydoras sp. 'CW049', C. sp. 'CW006' C. cf. orphonopterus, C. sp. 'CW007', C. cf. orcesi, Trachyopterus sp. 'Ottarongo', Trachelyichthys exilis, Centromochlus reticulatus, Caelatoglanis zonatus


The species is compared with A. gymnorhynchus, a similar species from adjacent drainages which has a distinct pattern and morphological arrangement.

Unfortunately, in the immediate vicinity of the type locality, there is human pressure on water resources.

In addition, human engineering affects most coastal streams, causing accelerating habitat loss and degradation. Thus, this new species must be considered vulnerable to extinction.

Rocha, MS & FRV Ribeiro, 2010. A new species of Pimelodus, P. luciae is described from Rio Itacaiunas, a clear water tributary of the Rio Tocantins, Brazil.

A review of Pimelodus species from the Amazon Basin revealed the existence of the undescribed species.

The Tocantins basin contains a rich freshwater fish fauna including many endemic species and a variety of habitats. The new species exhibits a unique spotted pigmentation pattern for Pimelodidae. P. luciae is known only from the type-locality.

N. Anganthoibi & W. Vishwanath, 2009. A new Erethistid catfish species, Hara koladynensis is described from Koladyn River, Mizoram, India, following a collection in the area.

It is distinguished from its congeners in having rough (vs. smooth or serrated) anterior margin of dorsal spine. At the point of collection, the river bottom is rocky and water current very fast. The isolated habitat (separated from other main river drainages by the unique geography of the area) is expected to yield many endemic species.
The paper provides a valuable reference resource for study of other Erithistidae.

Jiang, W-S, X-Y Chen & J-X Yang, 2010. A new species of sisorid catfish from the genus Glyptothorax has been described. G. obliquimaculatus originating from the Salween drainage of Yunnan, China

Ng, HH, 2010. A new species of Bagrid catfish has been described originating from Borneo. Pseudomystus funebris is a blackwater bumble catfish from the Rungan Drainage of southern Borneo. The species is found in floodplain peat swamps of a very low pH (<5).

If you have any sightings you would like to share or want to track down a paper, contact the Editor.

Acknowledgement is made to Planet Catfish and Practical Fishkeeping magazine for the original source of information on papers.
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CATFISH STUDY GROUP

SHOW RULES

Fish will be judged to Catfish Study Group Show Size Guide. Submittance of an entry implies acceptance of all of the rules.

1. 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.

2. Gravel/Sand is allowed. Aeration may be used.

3. 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.

4. Breeders teams will consist of 4 fish, minimum age 3 months, maximum 15 months. Date of birth/hatching and name of species must be shown on tanks.

5. Entries may not be moved, or interfered with once judging has commenced, except by order of the Judges or the Show Secretary.

6. DEBENCING is not allowed until the Show Secretary makes the announcement, except by prior arrangement with him.

7. The show organisers reserve the right to RE-BENCH any fish into their appropriate class.

8. PHOTOGRAPHY of entries will be permitted after judging is completed.

9. Time will be allocated to allow viewing of the judges' decisions.

10. The Judges decisions are final. Judging sheets will be displayed in the hall.

11. Any complaints, comments, etc., should be directed to the Show Secretary.

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.

CSG 2010
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