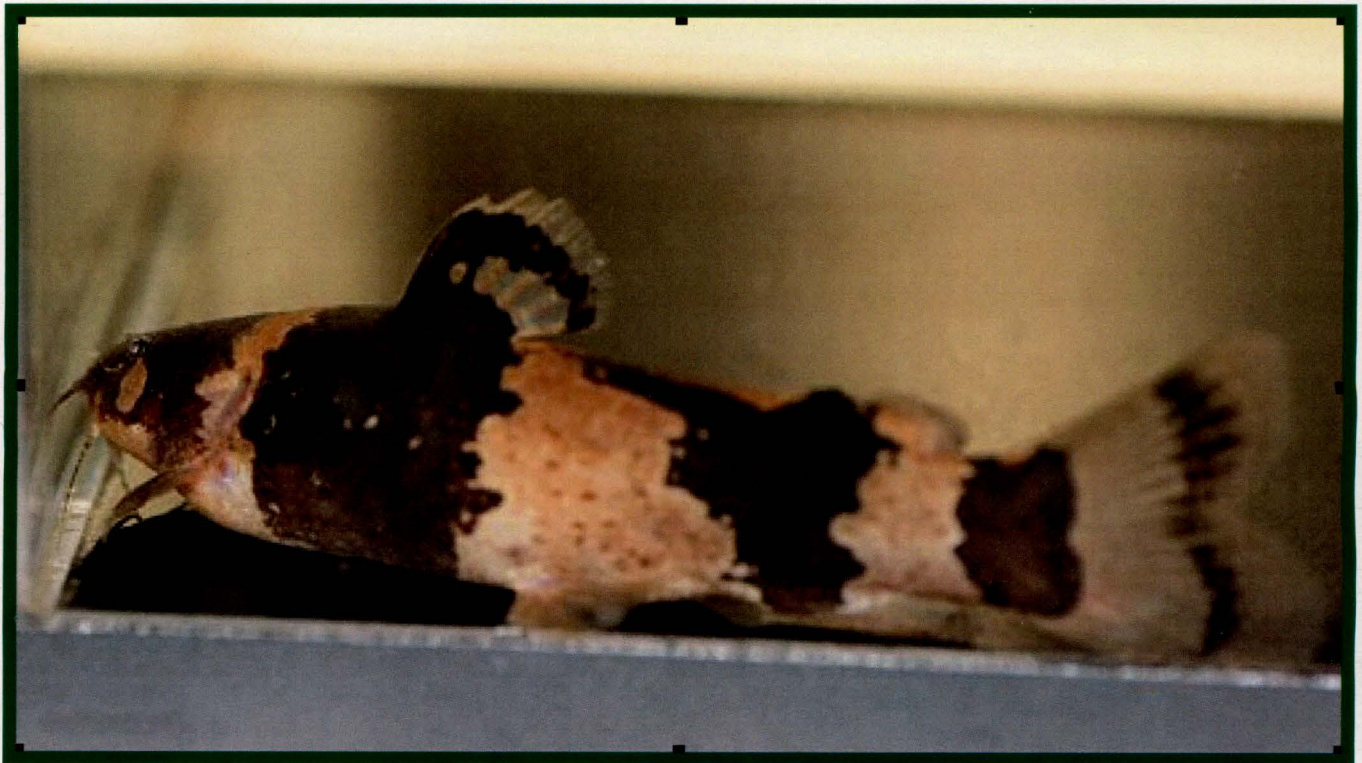


# **CATCHAT**

**THE JOURNAL OF THE CATFISH STUDY GROUP**



**2011 Open Show and Auction**

**Claroteid Catfish Importance of Flow**

***Spinipterus acsi* New Descriptions**



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## Diary Dates 2011-2012

Date	Meeting	Details
Nov 20th	Autumn Auction	Pre booking David Barton 01942 248130
Dec 11th	Christmas meeting	
Jan 15th	2012 AGM	
Feb 19th	Spring Auction	
March 16th - 18th	Annual Convention	
April 15th	Adrian Taylor	"Catfish Habitats".
May 20th	Spring Lecture & Mini Auction.	

**Pre booking for all Auctions contact: - David Barton 01942 248130**

Meetings are held on the third Sunday of each Month with the exception of the December meeting, which falls on the second Sunday,

Meetings start at 1pm and are held at the:-

**Highfields Working Men's Club,  
1 Ratcliffe Street,  
Darwen, Lancashire, BB3 2BZ**



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**Front cover – *Microglanis iheringi* 2011 CSG Open Show Winner –  
Image by Allan James**

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## Editorial

I hope all those who attended enjoyed the CSG Annual Open Show and Auction in September. It was another resounding success with many unusual species on show and an auction packed with otherwise impossible to find catfish.

This is my 30th year of showing fish, starting in the North West show league with Ellesmere Port Aquarium Keepers Society and to this day as a CSG and Castleford Aquarist Society member. There still remains a hard core of very enthusiastic fish keepers who support their local clubs, display their fish for little reward and keep the hobby going at a club level. For me, active membership of a club is the life-blood of the hobby – the opportunity to share experience, exchange fish and mix socially with like-minded people.

Exhibiting fish is hard work though – keeping rare species in perfect condition, selecting the best specimens, preparing show tanks, transporting them and benching and then returning them to their tanks at the end of the day. Often the only reward for your efforts is a tin of fish flake. The CSG always pulls out the stops to encourage as many people as possible, with goody bags and quality prizes for successful fish. I came home this year with bags of fish food and a couple of trophies for my efforts. I also picked up some great fish in the auction. As someone who regularly shows fish, part of the frustration is the limited number of classes available at Open Shows, considering catfish are one of the most diverse orders of fish. The CSG offers 36 classes representing all major families and different breeders classes providing catfish specialists

with a great opportunity to bring out rare and unusual species and compete more evenly.

My only gripe is in the way points are awarded for presentation of show tanks. In my view, unless there is a fish-welfare, judge-welfare (sharp edges) or obvious lack of attention to basic show tank requirements, maximum points should be awarded. In this and previous years I have noted inconsistent application of this category with classes determined not by the best fish but what appears to be the most highly polished glass!

It is only because of the transparency (no pun intended) in displaying all category points and judges comments that we can comment on this and the CSG must be applauded for this open approach to pointing. CSG members' views are welcomed on all aspects of club activities, through the CSG forum. No doubt the CSG committee will look at all aspects of the event and as always do their utmost to deliver one of the best shows in the U.K. Great thanks to all the club members who worked so hard in delivering the show and auction.

This edition of the Journal, of course features a report from Allan James on the show and auction with great images and full results. We also have some fantastic articles from Mike Hardman, Ian Watson and Steve Grant and ecology, scientific descriptions, and keeping catfish.

A reminder to book your places for the 2012 convention as soon as you can, further details are on the CSG website.

## Notices

Our annual autumn auction will take place as usual in Darwen on November 20th. If you would like to enter a lot, please call David Barton on 01942 248130.

The Convention Manager is taking deposits to secure your booking at the 2012 convention. Contact Ian for more details. Also, we have advertised the availability of space on the Breeders Award Programme display at the Convention. Tank space is available for you to exhibit any groups of fish which have been submitted to the BAP. Contact the BAP Secretary for more details. Additional details on the sale of fish at the Convention has been posted on the CSG Forum.

The CSG Annual General Meeting will be held on the 15th January. The position of Membership Secretary will be determined. If you would like to express an interest in this position, please contact the Secretary before the December meeting.





## 2011 CSG Open Show and Auction Allan James



*Mochokiella Paynei* – Image by Mark Walters

Our Open Show on the Sunday 18th September was once again a great success. The number of entries was slightly down this year with a total of 127, but there was a lot of quality catfish on show for the audience to view later on in the day.

The Committee once again would like to thank all exhibitors for turning up on the day to show their fish. Thanks must also go to Show Secretary Brian Walsh and the Judges on the day for their hard work, and the helpers in the canteen again did a sterling job keeping up the teas, coffees and the food flowing along.

The auction also went well and of course thanks must go to the CSG members who helped on the day and also our resident auctioneer Steve Spence for another excellent job.

Special mention must be made of course to the sponsors of our show, which you can see below each class, which meant we did not have to charge for fish entries. Remember it is only £10 to sponsor a class for next years show.

Here's a complete list of all the auctioned catfish:

**Corydoras:** *panda*, *weitzmani*, *black aeneus*, *albino paleatus*, *albino aeneus*, *araguaiaensis*, *sodalis*, *diphyes*, *pygmaeus*, *hastatus*, *habrosus*, *imitator*, *carlae*, *multimaculatus*, CW010, *nijsseni*, *longipinnis*, C26

**Aspidoras:** *taurus*, C125, C125 'gold', C118, C119, CW052

**Scleromystax:** C112, *lacerdai*.

**Other Callichthyidae:** *Callichthys callichthys*, *Megalechis picta*, *M. thoracatum*, *Dianema longibarbis*

**Loricarids:** *Peckoltia compta*, *Hypancistrus Monte Dourado* L411, *Ancistrus* L182, *Hypancistrus* L136c, *Ancistrus* LDA08, *Hemiancistrus subviridis* L200, *Baryancistrus demantoides* L200, *Hypancistrus* L201, *Peckoltia lineola* L202, *Peckoltia sabaji* L075, *Deckeseria* L052, *Hypancistrus* L333, red *Ancistrus*, *Loricaria similima*, *Rhineloricaria lanceolata*, *Otocinclus* sp., royal panaque, *Sturisoma panamense*

**Others:** *Synodontis eupterus*, *Microsynodontis batesii*, *Orinocodoras eigenmani*, *Hyalobagrus flavus*, *Tatia intermedia*, *Hara miniscula*

Highest price for an individual cat was £25 for a 6" *Hemiancistrus subviridis*.





## Open Show Results

<b>1</b>	<b>Aspidoras</b>		<b>Entries 3</b>	
1	Mike Kirkham	CSG	<i>Aspidoras spilotos</i>	80
2	John Hetherington	CSG	<i>Aspidoras taurus</i>	79
3	John Hetherington	CSG	<i>Aspidoras fuscoguttatus</i>	76
Sponsor: Mike Kirkham - CSG Member				
<b>2</b>	<b>Brochis</b>		<b>Entries 3</b>	
1	Mike Kirkham	CSG	<i>Brochis splendens</i>	81
2	Allan White	CSG	<i>Brochis britskii</i>	77
3	Allan White	CSG	<i>Brochis britskii</i>	74
Sponsor: Brian Walsh – g.b.w@live.co.uk				
<b>3</b>	<b>Corydoras "A" up to 55mm SL (F)</b>		<b>Entries 11</b>	
1	Mark Walters	CSG	<i>Corydoras gracilis</i>	83
2	Mark Walters	CSG	<i>Corydoras diphyses</i>	82.5
3	Ian Fuller	CSG	<i>Corydoras boesemani</i>	82
Sponsor: Ian Fuller – Corydorasworld.com				
<b>4</b>	<b>Corydoras "B" over 55mm SL</b>		<b>Entries 8</b>	
1	I & K Wallbridge	CSG	<i>Corydoras concolor</i>	80
2	Mike Kirkham	CSG	<i>Corydoras pulcher</i>	79
3	Mark Walters	CSG	<i>Corydoras longipinnis</i>	76.5
Sponsor: Ian Fuller – Corydorasworld.com				
<b>5</b>	<b>Corydoras Types C &amp; CW Nos/Unid.</b>		<b>Entries 5</b>	
1	Mark Walters	CSG	CW024	82
2	Ian Fuller	CSG	CW010	80.5
3	Ian Fuller	CSG	C123	80
Sponsor: Ian Fuller – Corydorasworld.com				
<b>6</b>	<b>Scleromystax</b>		<b>Entries 4</b>	
1	Mark Walters	CSG	<i>Scleromystax kronei</i>	85
2	Ian Fuller	CSG	<i>Scleromystax lacerdai</i>	77.5
3	Ian Fuller	CSG	<i>Scleromystax lacerdai</i>	77
Sponsor: Mike Kirkham – CSG Member				
<b>7</b>	<b>AOV Callichthyidae</b>		<b>Entries 1</b>	
1	Mark Walters	CSG	<i>Lepthoplosternum pectorale</i>	70
Sponsor: Reef & River, Morecambe				
<b>8</b>	<b>Aspredinidae</b>		<b>Entries 3</b>	
1	Steve Grant	Castleford	<i>Bunocephalus amaurus</i>	77
2	Steve Grant	Castleford	<i>Pseudobunocephalus quadriradiatus</i>	76
3	Steve Grant	Castleford	<i>Bunocephalus verucossus</i>	70
Sponsor: Reef & River, Morecambe				



<b>9</b>	<b>Auchenipteridae</b>		<b>Entries 3</b>	
1	Mark Walters	CSG	<i>Centromochlus romani</i>	85
2	Allan White	CSG	<i>Trachelypterichthys taeniatus</i>	84
3	Steve Grant	Castleford	<i>Auchenipterichthys punctatus</i>	76
Sponsor: Reef & River, Morecambe				
<b>10</b>	<b>Bagridae</b>		<b>Entries 5</b>	
1	Ian Fuller	CSG	<i>Phyllonemus typus</i>	82
2	Roy Blackburn	Castleford	<i>Pseudomystus stenomous</i>	81
3	Roy Blackburn	Castleford	<i>Pseudomystus heokhuii</i>	80
Sponsor: Aqua Life, Wyevale Garden Centre, Ulnes Walton				
<b>11</b>	<b>Doradidae</b>		<b>Entries 7</b>	
1	Allan White	CSG	<i>Agamyxis pectinifrons</i>	85
2	Roy Blackburn	Castleford	<i>Agamyxis pectinifrons</i>	83
3	Roy Blackburn	Castleford	<i>Acanthodoras spinosissimus</i>	81
Sponsor: Steve Wood – CSG Secretary				
<b>12</b>	<b>Loricariidae up to 130mm SL.</b>		<b>Entries 6</b>	
1	John Hetherington	CSG	<i>Rhineloricara parva</i>	84
2	Mike Kirkham	CSG	<i>Otocinclus cocama</i>	83
3	Mark Walters	CSG	<i>Peckoltia braueri</i>	79
Sponsor: Julian Dignall – planetcatfish.com				
<b>13</b>	<b>Loricariidae over 130mm SL.</b>		<b>Entries 3</b>	
1	Allan White	CSG	<i>Farlowella acus</i>	83
2	Mark Walters	CSG	<i>Hemiancistrus subviridis</i>	80
3	Mike Kirkham	CSG	<i>Loricaria playa</i> [judged] <i>Limatulichthys griseus</i>	62
Sponsor: Julian Dignall – planetcatfish.com				
<b>14</b>	<b>Loricariidae L &amp; LDA No's up to 130mm SL.</b>		<b>Entries 6</b>	
1	Allan White	CSG	L38	86
2	Dave Speed	CSG	L072	85
3	Allan White	CSG	L104	84
Sponsor: Julian Dignall – planetcatfish.com				
<b>15</b>	<b>Loricariidae L &amp; LDA No's over 130mm SL.</b>		<b>Entries 1</b>	
1	Allan White	CSG	L128	79
Sponsor: Julian Dignall – planetcatfish.com				
<b>16</b>	<b>Mochokidae up to 130mm SL.</b>		<b>Entries 4</b>	
1	Mark Walters	CSG	<i>Microsynodontis</i> sp	86
2	Ian Fuller	CSG	<i>Mochokiella paynei</i>	83
3	Roy Blackburn	Castleford	<i>Mochokiella paynei</i>	79
Sponsor: Allan James – scotcat.com				



<b>17</b>	<b>Mochokidae up to 130mm SL.</b>		<b>Entries 1</b>	
1	Mike Kirkham	CSG	<i>Synodontis angelicus</i>	87
Sponsor: Allan James – scotcat.com				
<b>18</b>	<b>Pimelodidae up to 100mm SL.</b>		<b>Entries 6</b>	
1	Dave Speed	CSG	<i>Microglanis iheringi</i>	88
2	Roy Blackburn	Castleford	<i>Microglanis cottoides</i>	85
3	Mike Kirkham	CSG	<i>Microglanis iheringi</i>	84
Sponsor: Brian Walsh – g.b.w@live.co.uk				
<b>19</b>	<b>Pimelodidae over 130mm SL.</b>		<b>Entries 2</b>	
1	Roy Blackburn	Castleford	<i>Pimelodus tetramerus</i>	80
2	Mike Kirkham	CSG	<i>Pimelodus sp</i>	70
Sponsor: Brian Walsh – g.b.w@live.co.uk				
<b>20</b>	<b>Coldwater Catfish</b>		<b>Entries 2</b>	
1	Steve Grant	Castleford	<i>Noturus miurus</i>	76
2	Roy Blackburn	Castleford	<i>Noturus gyrinus</i>	75
Sponsor: Dave Barton – CSG Auction Manager				
<b>21</b>	<b>AOV Catfish – South American</b>		<b>Entries 2</b>	
1	Roy Blackburn	Castleford	<i>Ituglanis metae</i>	84
2	Roy Blackburn	Castleford	<i>Ituglanis amazonicus</i>	79
Sponsor: Dave Barton – CSG Auction Manager				
<b>22</b>	<b>AOV Catfish - African</b>		<b>Entries 1</b>	
1	Roy Blackburn	Castleford	<i>Parauchenoglanis balayi</i>	73
Sponsor: In memory of Terry Ward				
<b>23</b>	<b>AOV Catfish - Asian</b>		<b>Entries 6</b>	
1	Roy Blackburn	Castleford	<i>Akysis prashadi</i>	84
2	Allan White	CSG	<i>Erethistodes infuscatus</i>	82
3	Mike Kirkham	CSG	<i>Akysis prashadi</i>	77
Sponsor: Adrian Taylor – Asiancatfish.com				
<b>24</b>	<b>Pairs - Corydoradinae</b>		<b>Entries 7</b>	
1	Ian Fuller	CSG	<i>Corydoras undulatus</i>	87
2	Ian Fuller	CSG	CW51	86
3	Ian Fuller	CSG	CW10	85.5
Sponsor: Ian Fuller – Corydorasworld.com				
<b>25</b>	<b>Pairs - Loricariidae inc L&amp;LDA No's</b>		<b>Entries 3</b>	
1	Roy Blackburn	Castleford	<i>Peckoltia brevis</i>	84.5
2	Mark Walters	CSG	<i>Panaqolus LDA01</i>	81
3	John Hetherington	CSG	<i>Ancistrus sp.</i>	77.5
Sponsor: Bill Hurst – CSG Chairman				



<b>26</b>	<b>Pairs - AOV S. American</b>		<b>Entries 3</b>	
1	I & K Wallbridge	CSG	<i>Centromochlus altae</i>	85.5
2	Roy Blackburn	Castleford	<i>Bunocephalus amaurus</i>	83.5
3	Mark Walters	CSG	<i>Centromochlus romani</i>	83
Sponsor: Prestwood PetZone				
<b>27</b>	<b>Pairs - AOV - African</b>		<b>Entries 2</b>	
1	Mark Walters	CSG	<i>Microsynodontis sp.</i>	86
2	Roy Blackburn	Castleford	<i>Synodontis batesii</i>	80.5
Sponsor: Prestwood PetZone				
<b>28</b>	<b>Pairs - Asian</b>		<b>Entries 2</b>	
1	Roy Blackburn	Castleford	<i>Erethistes pusillus</i>	85.5
2	Allan White	CSG	<i>Erethistoides infuscatus</i>	85
No Sponsor				
<b>29</b>	<b>Breeders - Corydoradinae</b>		<b>Entries 5</b>	
1	Ian Fuller	CSG	CW009	85
2	I & K Wallbridge	CSG	<i>Corydoras concolor</i>	82
3	Ian Fuller	CSG	CW010	81
Sponsor: Ian Fuller – Corydorasworld.com				
<b>30</b>	<b>Breeders - Loricariidae Inc. L&amp;LDA No's</b>		<b>Entries 6</b>	
1	Allan White	CSG	<i>Loricaria simillima</i>	85
2	Allan White	CSG	<i>Loricaria simillima</i>	83
3	Mark Walters	CSG	L066 <i>Hypancistrus sp</i>	81
Sponsor: Danny Blundell CSG Treasurer				
<b>31</b>	<b>Breeders - AOV S. American</b>		<b>Entries 1</b>	
1	I & K Wallbridge	CSG	<i>Centromochlus perugiae</i>	82
Sponsor: Allan White – CSG Member				
<b>32</b>	<b>Breeders - AOV African</b>		<b>Entries 0</b>	
<b>33</b>	<b>Breeders - AOV Asian</b>		<b>Entries 0</b>	
Sponsor: Allan White – CSG Member				
<b>34</b>	<b>Family Class -Pair &amp; Breeders team</b>		<b>Entries 3</b>	
1	Ian Fuller	CSG	CW10	166.5
2	Ian Fuller	CSG	<i>Corydoras undulatus</i>	166
3	Ian Fuller	CSG	CW51	162
<b>35</b>	<b>Breeders Master Class</b>			
1	Mark Walters	CSG		240
2	Ian Fuller	CSG		236
Ted Derrick Memorial Trophy - Sponsor: Mark Walters – Cat Chat Editor				

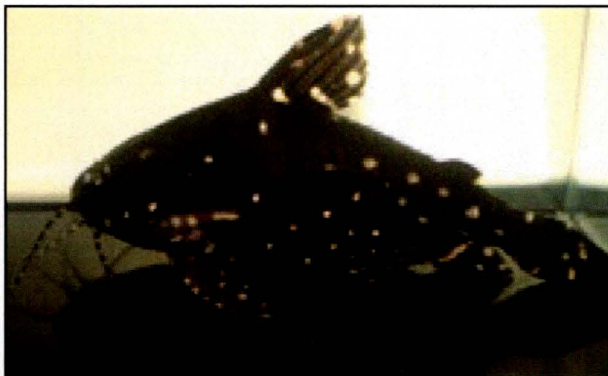


## Special Award Winners 2011

<b>Best Fish in Show - Committee Cup</b>				
1	David Speed	CSG	<i>Microglanis iheringi</i>	Class 18
2	Roy Blackburn	Castleford	<i>Akysis prashadi</i>	Class 23
3	Mark Walters	CSG	<i>Corydoras gracilis</i>	Class 3

<b>Best Corydoradinae - Yvonne Cank Memorial Trophy</b>				
Mark Walters	CSG	<i>Corydoras gracilis</i>	Class 3	
<b>Best from Classes 7-11 – Masterstaff Cup</b>				
Mark Walters	CSG	<i>Centromochlus romani</i>	Class 9	
<b>Best Loricariidae – Masterstaff Trophy</b>				
Allan White	CSG	L38	Class 14	
<b>Best Synodontis – L.M.B. Aquatics Shield</b>				
Mike Kirkham	CSG	<i>Synodontis angelicus</i>	Class 17	
<b>Best Pimelodidae – S &amp; P S Cup</b>				
Dave Speed	CSG	<i>Microglanis iheringi</i>	Class 18	
<b>Best AOV Catfish – A.O.V. Catfish Cup</b>				
Roy Blackburn	Castleford	<i>Akysis prashadi</i>	Class 23	
<b>Best Pair – Clint Cup</b>				
Ian Fuller	CSG	<i>Corydoras undulatus</i>	Class 24	
<b>Best Breeders Team – Kings Carpets Trophy</b>				
Allan White	CSG	<i>Loricaria simillima</i>	Class 30	

The gallery below shows many of the fantastic fish on display.

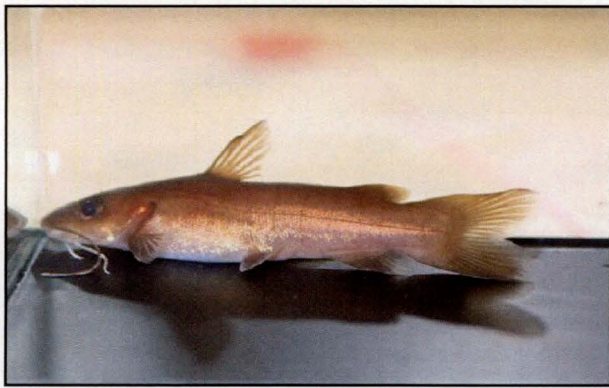


*Agamyxis pectinifrons* image Mark Walters



*Akysis prashadi* image Mark Walters

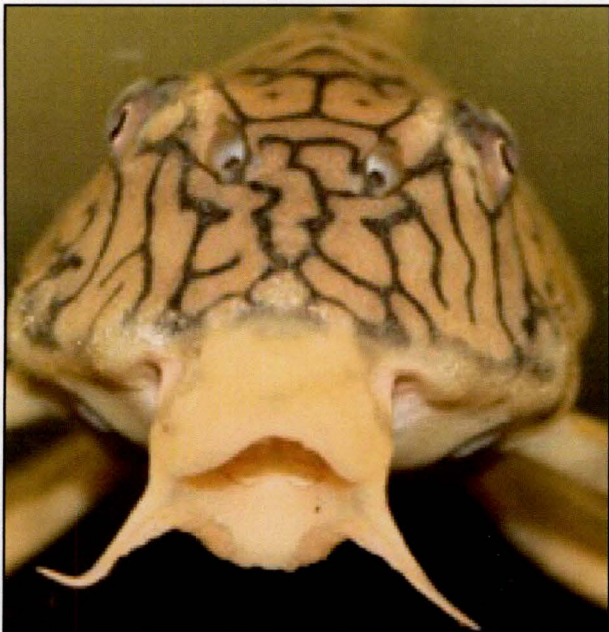




*Phyllonemus typus* Image Steve Grant



*Corydoras concolor* image Mark Walters



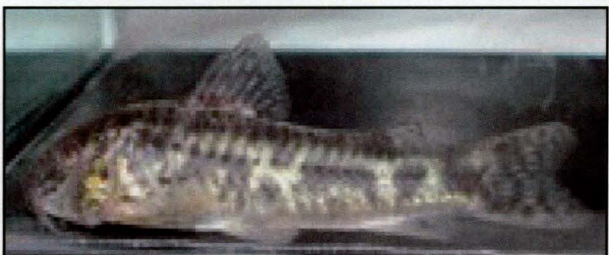
*Peckoltia braueri* image Mark Walters



*Imparfinis minutus* Image Steve Grant



*Lophiobagrus cyclurus* image Mark Walters



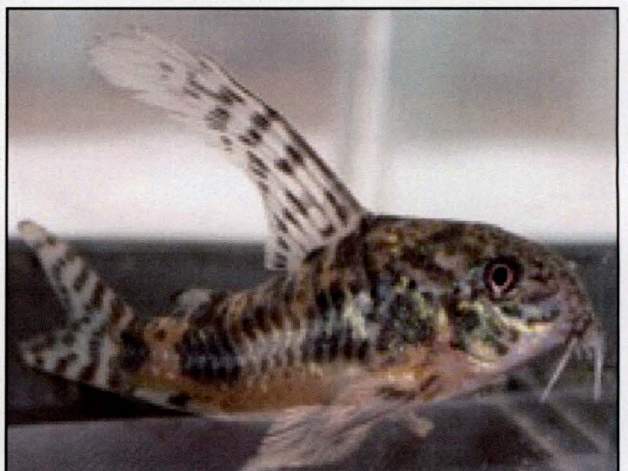
*Aspidoras spilotos* Image Steve Grant



*Microsynodontis* sp. Image Steve Grant



*Corydoras* sp. CW51 Image Steve Grant



*Corydoras longipinnis* image Mark Walters

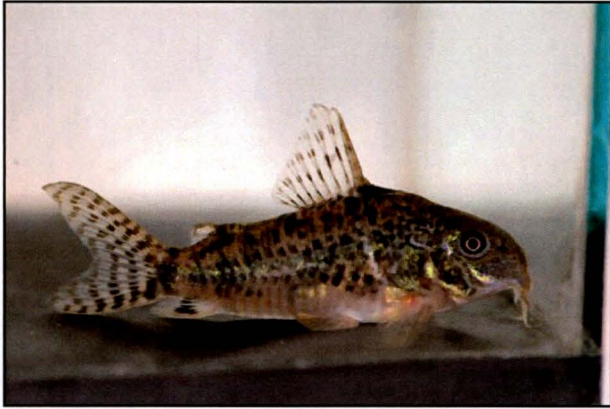




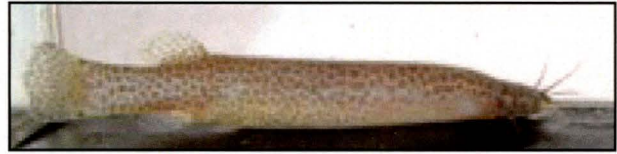
*Peckoltia* L377 Image Steve Grant



*Corydoras acutus* Image Steve Grant



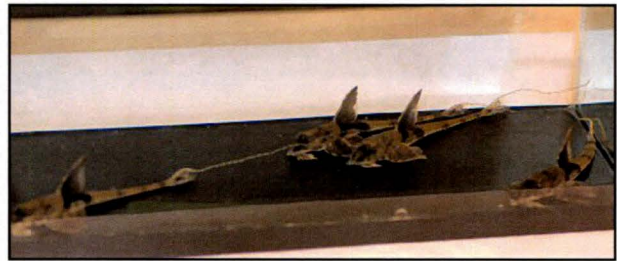
*Corydoras* CW024 Image Allan James



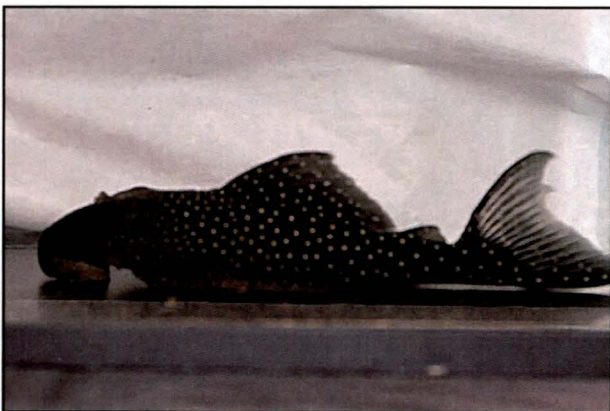
*Ituglanis metae* Image Steve Grant



*Peckoltia* L038 Image Allan James



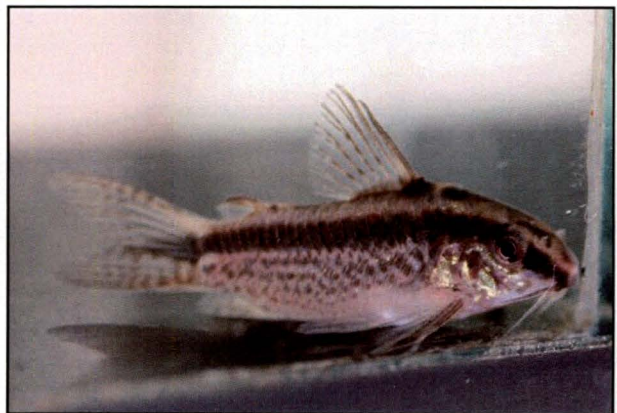
*Loricaria simillima* Image Allan James



*Hemiancistrus* L128 Image Allan James



*Bunocephalus amaurus* Image Allan James

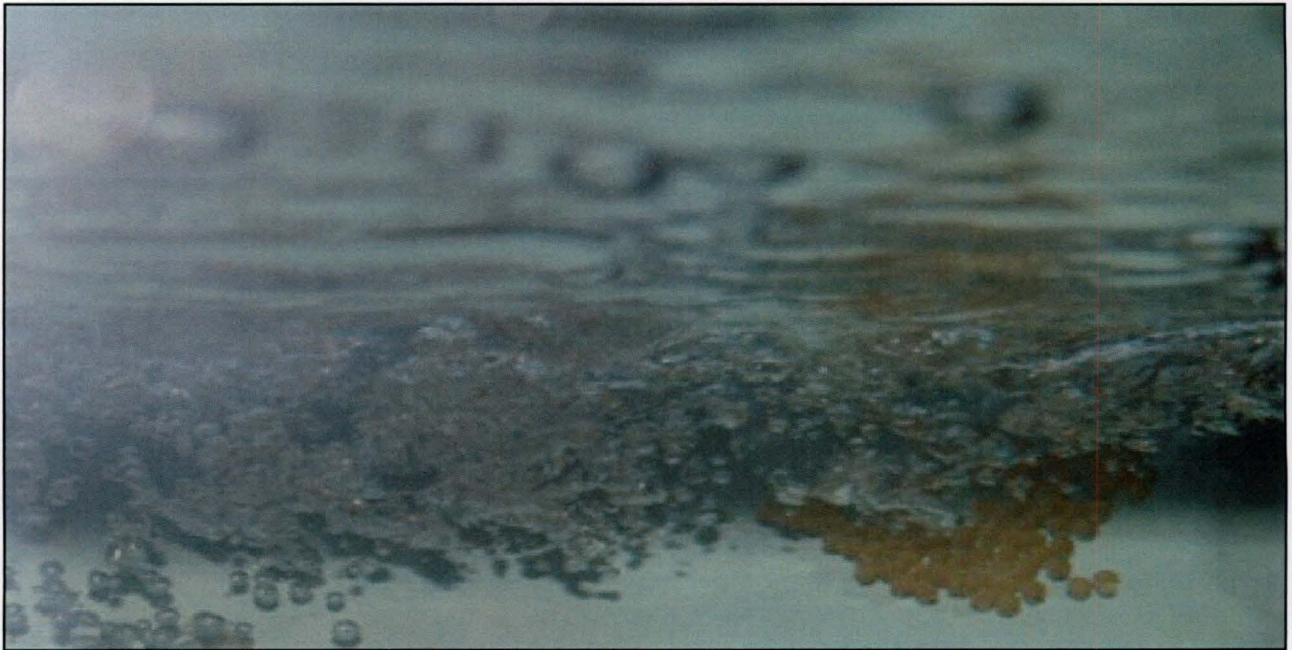


*Corydoras gracilis* Image Allan James



## How much flow is “enough”?

By Ian Watson



Many catfish prefer to deposit their eggs in regions of highest flow – Image by Mark Walters

If you have ever spent time paddling around in streams you will have noticed two things. Firstly, it is hard work walking upstream and the current is much stronger than you had expected. Secondly, the little fishes have no problem at all coping with the same current. Having spent time looking around in Neotropical streams and rivers, I can guarantee that it can be very hard work indeed just to stay on your feet once the water gets above knee height and yet, looking down, I have seen juvenile loricariids clinging to rocks, their little bodies being batted from side to side by the current. It does not seem to worry them in the least. Just how fast are these small streams and rivers and how does what we provide in the aquarium compare? First of all, we need to take a diversion to the UK and consider some native fishes.

The common bream (*Abramis brama*) is shaped like an entree dish and is not one of nature's athletes and inhabits lakes and slow-flowing rivers. You will find it in rivers with a typical flow of less than 30 cm/second.

The barbel (*Barbus barbus*) by contrast is a much more powerful fish which seems to manage to keep station in a strong current with very little effort. Its streamlined shape obviously helps with this, and it really is quite instructive to see how little effort appears to be expended by a barbel to keep its position in the river or to move upstream. You will find the barbel in rivers with a typical flow of up to 60 cm/second.

The brown trout (*Salmo trutta*) lives in a wide range

of habitats from large lakes to tiny mountain streams you could step across. It hangs on in mountain streams which resemble a Jacuzzi even when not in flood which is quite an achievement when you consider that small mountain streams often contain stunted trout which rarely grow to much more than 20cm in length. You will find the brown trout in flows of up to 90 cm/second.

Are you beginning to spot trouble yet? Let's consider the bream. Take that flow of 30 cm/second and apply it to a standard aquarium of 120L x 30H x 30 W cm (a standard 4 foot aquarium with a 1 foot water depth). At a flow of 30 cm/second, it will take 4 seconds for the water to flow from one end of the aquarium to the other. Does that sound intimidating? Now we move on to the flow calculation. Every second, a cube of water 30 x 30 x 30cm needs to be moved; that is volume of 27l. So, 27l/second is the pumping rate we need to get that flow or 1620 l/minute or 97200 l/hour (about 21400 gallons/hour).

Where do we start? A great big power filter? That does not even make it to the starting line. OK, how about a really big power filter the size of a small dustbin? Nope, not even close. How about a pond pump? Now we're talking, just so long as we are talking about koi ponds. In fact, you need a swimming pool type pump to get anywhere near this flow and plumbing one of those into an aquarium system presents a few problems, not the least of which is that it would take just 4 seconds to empty the aquarium in case of a leak!



All this to make one of nature's less athletic fishes break into a (metaphorical) sweat. Imagine the problems of trying to provide anything like a "natural" flow rate for the barbel or brown trout, let alone some of those tropical catfishes which live in really strong currents.

Now, I know some of you will be thinking that the current on the bed of the river or stream is slower than at the surface. It is, but not that much less, hence the reason why many cats have adaptations to enable them to cling to rocks without being washed away (sucker mouths, modified pectoral and pelvic fins and so on) which can work even on vertical rocks in a torrent. If you really want to test this, try netting little fishes in a stream, even if it is loaches and bullheads in the UK. You will find that even a modest current makes aquarium nets collapse and, if you use a larger, more robust net, it really takes some effort to move it upstream (tip – flush the fish down into a static net; it's a lot easier). Netting fishes at the bottom of a stream is not much easier than netting them in mid-water.

Does it matter? That depends..... in fact it all depends on the fishes. If you watch the fishes in the aquarium, you can fairly quickly work out which really want a strong current, which ones are not too fussy and which ones dislike a strong current. If you spot one of your catfish sitting in the strongest current then you can reckon it needs good flow and if the fish fight for the place with the highest flow, you can reckon that you need to satisfy this requirement in the whole aquarium to prevent fights and stress for the less dominant fishes. In fact, a high flow region in the aquarium can help in diffusing aggression between fishes (that certainly works for the rheophilic cichlid *Crenicichla compressiceps*).

Given that it is impractical to connect up a large pond pump to an aquarium, how can you achieve a reasonably high flow? Cheat! In most cases, you do not need to supply a high flow in the whole aquarium, just an area with high flow. This can be done most simply by using the right return from the power filter. Replacing a spray bar with a jet-type return, an air injector or even just using the pipe from the filter directly can all achieve a good flow in one spot. You can also get a very good result by using a water pump to achieve a high flow region and this is a much cheaper option than buying a power filter with equivalent flow. Simple, external aquarium pumps are available which can provide a pretty good flow and some external pond pumps can also be suitable.

However, this still leaves one problem; the flow in nature is generally laminar (i.e. it would flow from one end of the aquarium to the other) which is generally quite difficult to achieve with a power filter.

What you usually end up with is strong flow across the surface (e.g. from a spray bar) or more or less circulatory currents (e.g. from a jet pipe or injector) which is not very natural. Of course, this might suit your fishes quite well, but there are times when it does not really work. Where you have a lot of aggressive interactions between fishes over who gets the best place in the current, the provision of laminar flow would be a good idea and it will probably need to be quite a strong flow. To do this, a little DIY is needed.

The first thing is to make sure that the filter (and pump if necessary) inlet and outlet are at opposite ends of the aquarium. If they are not, you will not be able to get laminar flow. The second thing to do is provide a return from the power filter and/or pump which will promote laminar flow (a single pipe outlet will not do this). You can do this by constructing a simple tee-bar return or some other arrangement which will ensure return flow is delivered right across the aquarium, from side to side. You could either make a slot in the tee-bar or drill holes in it at frequent intervals. Make sure the holes are not too small or they will inhibit flow as aquarium filters and pumps are not very good at coping with head and resistance. Locate the tee-bar at about mid-water to make sure the flow will be where the fishes need it rather than across the surface. Do not place the return too close to the bottom of the aquarium as a strong flow will move sand and gravel.

Finally, I will leave you with this to consider. *Parancistrus nudiventris* was described from the rio Xingu where it is found in flows described as "moderate to strong", i.e. 40 – 190

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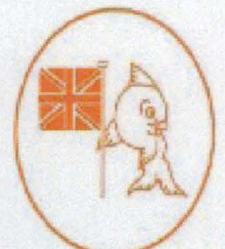
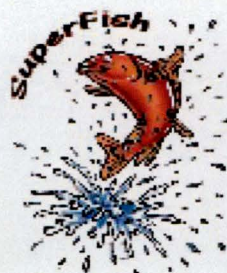
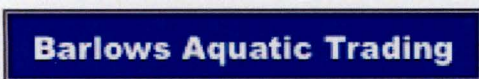
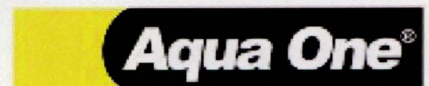
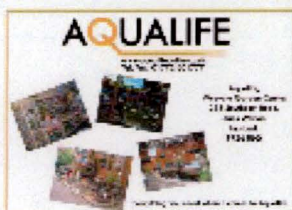
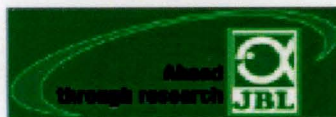
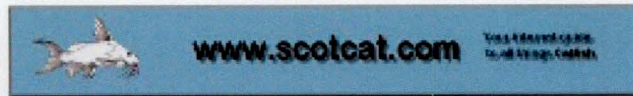


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***Spinipterus acsi* Akama & Ferraris 2011 - A new, strange, dwarf Driftwood Catfish, with comments on the 'Novia Otorongo' Woodcatfish (Siluriformes: Auchenipteridae)**  
**Steven Grant**

Driftwood Catfish, or auchenipterids, are one of my favourite catfish. In early 2010 I attended a Castleford Aquarist Society auction and came across 4 specimens of a very unusual driftwood catfish the likes of which I had never seen before. At first glance they looked like a cross between a *Tatia* and a *Liosomadoras*! I instantly knew they were something new.

Upon checking on the Planet Catfish website another auchenipterid enthusiast, Marc Stabel, also had some and had also recognised them as something new. In August 2011 *Spinipterus acsi* Akama & Ferraris 2011 was described from the Peruvian Amazon based on one specimen, and it became clear that our fish belonged in the genus *Spinipterus*, and were quite likely *Spinipterus acsi*.

This article gives some information on *Spinipterus acsi* and also speculates on another fish in the hobby as belonging to the genus *Spinipterus*, itself also a new species.

#### Familial relationships

The most recent trend is to regard the family Auchenipteridae as being split into two subfamilies: Centromochlinae (*Tatia* Miranda Ribeiro 1911; *Centromochlus* Kner 1858; *Glanidium* Lütken 1874) and Auchenipterinae (all the other woodcats) (Soares-Porto, 1998). However, work by Britski (1972) and Curran (1989) support other subfamilies, one of which is the Trachycorystinae which if valid would include *Trachycorystes* Bleeker 1858; *Liosomadoras* Fowler 1940; and *Tocantinsia* Mees 1974. *Spinipterus* has been likened to *Trachycorystes* by Marc Stabel, and by me as being reminiscent between *Tatia* (body shape) and *Liosomadoras* (cranial and pectoral girdle morphology).

In the description Akama & Ferraris tentatively place it in Auchenipterinae and state its morphology is closest to *Trachelyopterichthys* Bleeker 1862, despite the differences in body shape and fin ray counts. Because they only had one, immature, specimen they could not do detailed morphological comparisons.

#### Unique genus

*Spinipterus acsi* is unique amongst described Auchenipterids in that it has a combination of:

- Pectoral and dorsal fin spines with four rows of serrations running from base to tip of the spines (see fig. 1)



Fig 1: Anterior and lateral margin serrations on dorsal fin spine of *Spinipterus acsi*. Steve Grant

- Lateral margins of skull roof bones ornamented with a single row of spines (fig. 2)

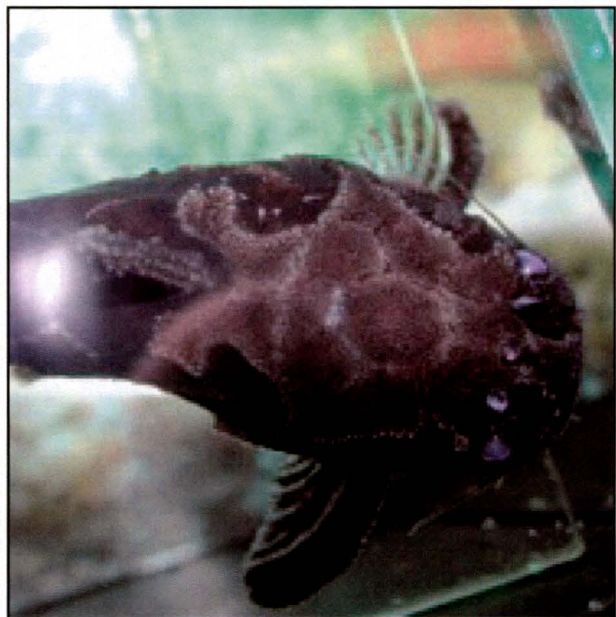


Fig 2: Spines on lateral margins of skull roof bones of *Spinipterus acsi*. Steve Grant

- Presence of a groove along the ridge of the back where the dorsal fin rests when clamped to the body (fig. 3)





Fig 3: *Spinipterus acsi* adult male showing groove along ridge of back where dorsal fin spine rests when clamped to body. Steve Grant

- A unique combination of fin rays counts (notably the pectoral fin only having 5-6 branched rays, and the caudal having 18 rays).
- Long adipose fin base (at first glance the adipose fin looks small but it actually consists of a long ridge along the back)

However, there are 2 other potential new species of *Spinipterus* awaiting description: one from the Rio Negro basin and one from the Rio Madeira basin (Akama & Ferraris, 2011). When Marc Stabel's specimens were purchased the information he received was that they were from Guyana. I find it unlikely that specimens from Guyana of such a plain coloured fish would be happening, and I know from a Peru exporter's website that they were exporting *Spinipterus* around the time Marc and my specimens' previous owner acquired them.

I therefore think it is likely that our specimens were from Peru and are therefore likely to be *Spinipterus acsi*. The only thing that initially made me consider that my sexually mature specimens were not *Spinipterus acsi* and instead possibly one of the other two aforementioned undescribed species is that in my specimens the cranial bones are very granular (fig. 2) when compared with the holotype.

However, pictures of the smallest specimen I had shows that at a small size the bones are not as granular (fig. 4) and I hypothesise that this is due to the fish being sexually immature as is the case with the holotype.

This 'granulisation' with ontogeny is also present in the species discussed further below.

#### Additional morphological traits

As well as the ridge around the skull roofing bones as described by Akama & Ferraris (2011), my specimens of *Spinipterus* also have some other unusual morphological traits.

What appear to be the pre-opercle (fig 5.1), opercle (Fig. 5.2), and the hyomandibular-metapterygoid (fig. 5.3) are also spiny.<sup>(1)</sup>



Fig 4: Immature male *Spinipterus acsi* showing skull roofing bones not as granulated as mature males. Steve Grant

Only the last of the three characters is present in *Liosomadoras* and *Trachelyopterichthys*, albeit they are not as proportionately large or as rugose.

When I acquired my specimens they were emaciated, which meant that some of the internal bones were visible through the skin. As a result it appears that there is an epioccipital process that is partially under the skin but the tip seems to breach the skin at the lateral line (fig. 5.4). The post cleithral process also seems to carry on under the skin and arches upwards where it too seems to breach the skin at the lateral line (fig. 5.5).

My specimens are unfortunately all now dead but they have been preserved (in varying degrees of condition) for future morphological study in case specimens of this genus are difficult to come by in the future (BMNH 2010.10.12.1-3, 3 ex.; MBML 2563, 1 ex.).

#### A 'fourth' species – 'Novia Otorongo'



Fig 6: Adult *Spinipterus* sp. 'Novia Otorongo'. Dave Rinaldo

In my opinion there is a fourth<sup>2</sup> *Spinipterus* species. This one is known from the Rio Nanay (Peru Aquarium Group, 2006) and Dorado Lake, Pacaya-Samiria National Reserve, Peru (Kâsa, 2009) and has been in the hobby on a few occasions. It is known as *Novia Otorongo* by Peruvian exporters and in the hobby has been given the name *Trachelyopterus* 'sp. 2' (Planet Catfish, 2011).

<sup>1</sup> Tentatively identified using Diogo (2007).

<sup>2</sup> Unless one of the two undescribed species mentioned by Akama & Ferraris (2011) is also this species.



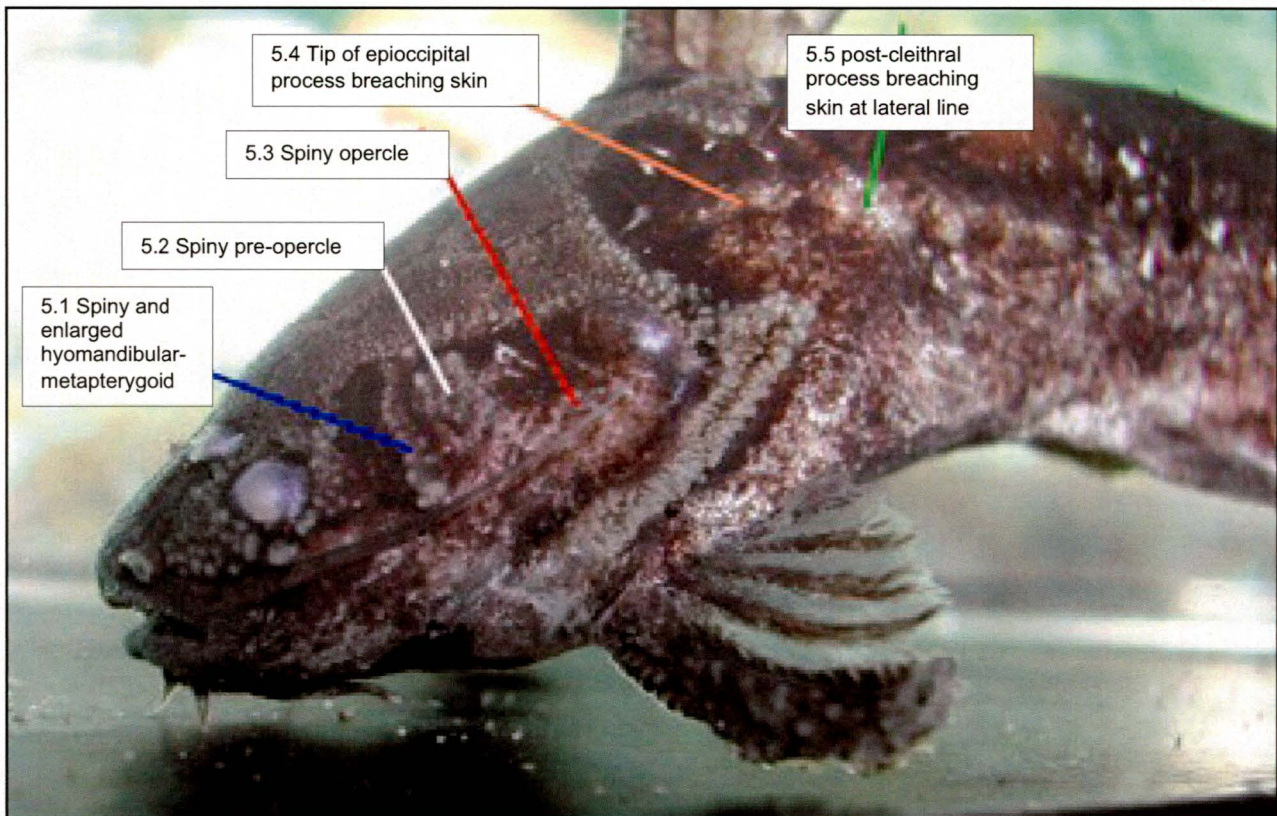


Fig 5 Additional characters of *Spinipterus acsi*. Steven Grant

However, in my opinion it belongs in *Spinipterus* not *Trachelyopterus*. It has all the 5 key characters mentioned above for *Spinipterus*, which are all lacking in *Trachelyopterus*. It also has the extended and rugose hyomandibular-metapterygoid<sup>4</sup> which is not the case in *Trachelyopterus*<sup>5</sup>. What differs *Spinipterus* sp 'Novia Otorongo' from *Spinipterus acsi* (apart from the obvious difference in colour and pattern) is that in the former the pectoral and dorsal fin spines get proportionately much longer, particularly when adult, and the additional rows of spines on these fins are not as distinct (but they are present) and are arranged in a different formation on the pectoral fin spines – see figs. 7 and 8.

Some small *Spinipterus* sp 'Novia Otorongo' have the short pectoral and dorsal fin spines (fig.9), but some that are small have longer ones (fig. 10), but most adults I have seen pictures of all have the fin spines proportionately long.

<sup>3</sup> *T. ceratophysus* (Kner 1858) has some additional spines on the pectoral and dorsal fin spines but their morphology is different.

<sup>4</sup> See footnote 1.

<sup>5</sup> Some species have it visible and rugose but if visible it is never extended.



Fig 7: Adult *Spinipterus* sp. 'Novia Otorongo' pectoral fin spine. Dave Rinaldo



Fig 8: Adult *Spinipterus* sp. 'Novia Otorongo' dorsal fin spine. Dave Rinaldo





Fig 9: Juvenile *Spinipterus* sp. 'Novia Otorongo'. Benjamin Lee, amiidae.com



Fig 10: Juvenile *Spinipterus* sp. 'Novia Otorongo' from Dorado Lake, Pacaya-Samiria National Reserve, Peru. Jørn Kåsa.

I have seen videos of adult *Spinipterus* sp 'Novia Otorongo' on the Internet and the row of spines round the skull roofing bones are very thick (Anonymous, 2010). *S.* sp 'Novia Otorongo' also seems to get to a larger adult size. My *Spinipterus* got to around 8cm SL and were all sexually mature males (identified by their modified anal fins) whereas *Spinipterus* sp 'Novia Otorongo' seems to get to at least 12cm SL. Interestingly all the *Spinipterus acsi* specimens Marc Stabel had were also males.

There appears to be some variation in the pattern of *Spinipterus* sp 'Novia Otorongo', similar to the variation found in *Liosomadoras oncinus* (Jardine 1841). When small they have distinct spots (fig. 9), and some adults appear to keep this pattern. However, other adults have irregular spots and marks (fig. 6).

#### ***Spinipterus acsi* in the aquarium**

*Spinipterus acsi* is a very shy species even for an auchenipterid. If not kept appropriately it will starve to death. It should ideally be kept in a small aquarium (approx. 18" x 10" x 10" or slightly bigger) on its own or with other small sluggish catfish.

If it is to be kept in a larger tank please ensure it does not have to compete with other nocturnal feeders unless they too are sluggish, small, and peaceful. If it has to compete for food with more lively or aggressive species it will die of starvation. When I got my 4 specimens they were very badly emaciated as they had been in a tank with boisterous catfish. Other than that it is not too difficult to keep although after a period of thriving my remaining 3 specimens died within a week of each other despite the other catfish species in the tank being unaffected. It will accept live and frozen bloodworm and chopped earthworms. If settled it will sometimes come out to eat with the lights on but if not please ensure food is in the tank for 'lights out'. It should be kept in slightly acidic water and mine were kept at around 78°F. As they grew to around 8cm SL my specimens seemed to lose the small black spots they had when smaller. As mentioned previously all known specimens in scientific (1) and aquarium literature (16) have been males.

All in all this is a fascinating, little peaceful fish. I appreciate it hasn't got the flashy colours/pattern of some other cats (or its congener 'Novia Otorongo') but to me this makes it even more interesting. If anyone comes across these fish I would love to hear from them as it would be interesting to see if any females turn up and if so they would make a good breeding project.

#### **Acknowledgements**

James Maclaine, Natural History Museum, London, England; Luisa Maria Sarmento-Soares, Museu de Biologia Prof. Mello Leitão, Laboratório de Zoologia, Santa Teresa, Brazil for handling the specimen deposits. Jørn Kåsa, Ben Lee (of amiidae.com), and Dave Rinaldo for information on and the use of their images of *Spinipterus* sp. 'Novia Otorongo'.

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## Focus on Claroteidae

### Michael Hardman



The Congo has been described as a green hell. Storybooks of the 19th century are filled with adventurers discovering lost worlds and being eaten by crocodiles or cannibals. The rewards and dangers were real; most prospectors, missionaries and explorers died within a few months of their arrival but the lucky ones earned a fortune in minerals or burial in the Nave of Westminster Abbey.

In spite of the health and safety hazards, European zoologists have collected fishes in Africa for over two hundred years. Most of this material is kept in the Natural History Museums of Britain, France and Belgium, and although Queen Victoria, Napoleon and King Leopold II are often remembered for their imperialistic expansion, specimens collected during their reigns are more precious than any diamond or gold nugget could ever be.

I began my own African adventure in 2006 when, under the auspices of the All Catfish Species Inventory, I opened a file on a diverse, widespread but poorly described group of catfishes, the Claroteidae.

Historically, claroteids have not been a popular subject for ichthyologists, perhaps as a consequence of their rather plain and general features and stiff competition from other diverse African clades such as the beautiful and complex Synodontis.

As such, most general texts on catfishes discuss the group rather generally and keep it at arms length.

I'm a sucker for underdogs and anything ignored or downtrodden; it's where the surprising secrets are found. And given that so little information was available about claroteids, I decided my time would be well spent on their study.

Claroteids have been around for at least 45 million years. Back then, they had slightly different caudal fins but were otherwise much the same as they are today.

They are found throughout sub-Saharan Africa, from the Nile and small Somali rivers in the northeast, westwards through the Lake Chad system into the great West African Rivers of the Niger, Gambia and Sénégal, through the Atlantic streams of Cameroon, Gabon and the Congo as far as Lakes Tanganyika and Bangweulu. There is also an isolated southeastern species in Mozambique.

Taxonomically, there are roughly 60 species classified in nine genera, of which perhaps a dozen species from four genera make it into the aquarium trade. The centre of claroteid diversity is the Congo basin, which contains 24 species and four genera, 80% of which occur nowhere else.



The remaining species are found in Lake Tanganyika (15 species, 4 genera, all endemic), West Africa, the Nile or small coastal streams draining into the Indian or Atlantic Oceans.



In the middle and upper reaches of the Congo River, *Chrysichthys habereri* is widespread and easily recognized by its underslung jaw

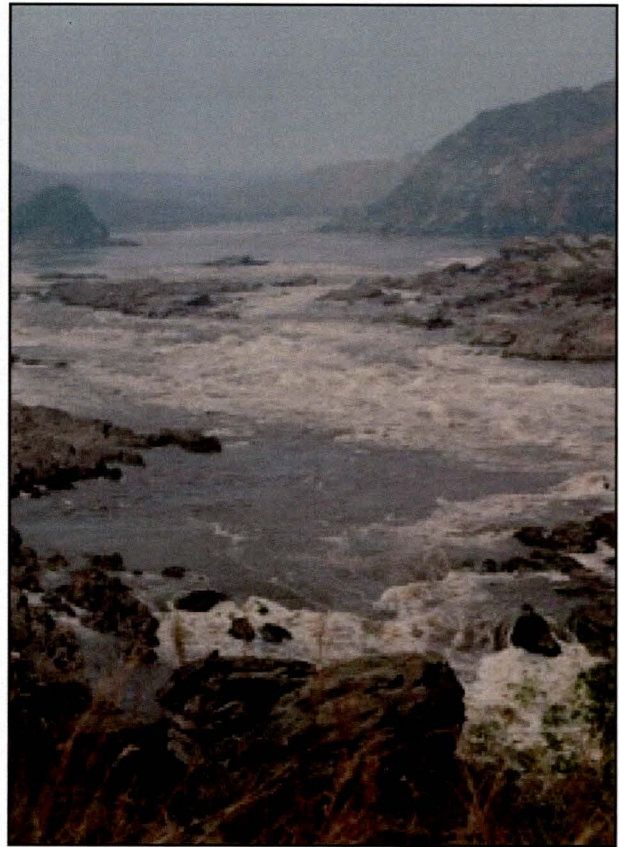
The diversity and distribution of grunters in the Congo are, understandably, tied to the evolution of the river itself. Although authorities still debate the subject, the Congo River is thought to be a relatively youthful 3-5 million years old. Prior to that time, most of the area that the river now drains was submerged under a massive landlocked lake.

The geology of Central Africa can be thought of as a shallow cereal bowl. A ring of ancient, highly weathered and hard rocks forms the wall of the bowl and sediment collects in the bottom like the sugar from your corn flakes. What are now the headwaters of the Congo (upper Lualaba River and Lakes Bangweulu and Mweru) were once part of the Nile system and flowed northeastwards, eventually emptying into the Mediterranean Sea. Similarly, the main northern tributary of the Congo (the Oubangui River) once flowed northward into what is nowadays Lake Chad.

At least two species of Claroteidae are adapted to life in the cataracts. *Amarginops platus* and *Rheoglanis dendrophorus* have small eyes thickly covered with skin, and long, flat, muscular bodies that can access the slack water among boulders in strong currents. *Amarginops* is found in the upper Congo around Kisangani whereas the much larger *Rheoglanis* is typically found in the middle Congo below Kinshasa.

Claroteid genera are, at first glance, rather similar. But, just like in "spot the difference", the longer we look at them the more we see how they differ. The genera can be teased apart on the basis of whether the eye is covered with skin or sits freely in its orbit, the number and form of the barbels and toothpads on the roof of the mouth, the shape of the caudal fin and structure of the adipose fin.

Within the genera, these same characters are important as well as fin ray and gill raker counts and relative distances between anatomical landmarks.



Only a handful of species have any kind of patterned pigmentation, the rest being grey-brown with a metallic sheen in life. *Chrysichthys ornatus* is quite different from all others in having a striking marble pattern that helps camouflage it among debris piles while it waits to ambush small fishes.



Every species, except members of *Gephyroglanis*, has a characteristic set of toothplates in the roof of the mouth. These extra teeth help to seize prey items and tell the species apart

Other patterned grunters include *Chrysichthys punctatus* (peppered with small freckles), *Chrysichthys okae* (bands and blotches), and *Clarotes laticeps* (a dark longitudinal stripe extending through the caudal fin and a bright white belly).



In Nigeria, *Chrysichthys* is cultured in lagoons and is an important foodfish. In most cases, eggs are harvested by placing baskets in areas where the cultured species are known to spawn naturally. Elsewhere, pairs are placed in pipes stoppered at both ends with strainers. Once they have spawned, the parents are removed and the eggs are kept in constant flow chambers until they hatch 7-10 days later.



Some species, such as *Chrysichthys cranchii*, reach large sizes and are prized by local fishermen and restaurant owners.

In several species, males develop swollen cheek muscles, lips and palatal toothplates and rely on their intimidating appearance to establish and defend a nest, usually in a hollow log or undercut bank. At least two genera in Lake Tanganyika (*Phyllonemus* and *Lophiobagrus*) are mouthbrooders, so members of this family have advanced parental care.



Adult males of several species, including *Rheoglanis dendrophorus*, develop thick lips and beef up their cheek muscles in anticipation of a successful spawning season.

In terms of their feeding ecology, most species are opportunistic predators that feed on fishes, crabs, shrimp, worms, clams, snails and aquatic insects in the wild. In the aquarium, they quickly adapt to prepared flake and tablet foods, but will always relish the occasional treat of chopped earthworm and musselmeat.

Those imported into the aquarium trade include several species from Lake Tanganyika. Given the hard and alkaline chemistry of the lake, *Lophiobagrus*, *Phyllonemus*, *Chrysichthys brachynema* or

*C. sianenna* should be kept in these conditions to promote their best health and encourage the chances of a captive spawning. *Lophiobagrus* and *Phyllonemus* are especially suitable for aquaria as they are both adult at around 10 cm and add intrigue to a cichlid set up. Tanganyikan *Chrysichthys*, on the other hand, grow considerably larger (20–80 cm) and not really for the home aquarist.

The other species you will most likely see in the shops are mainly from the Congo (*Chrysichthys ornatus* and *C. thonneri*) and Nigeria (*C. walkeri*, *C. nigrodigitatus* and *Clarotes laticeps*). These species, all of which reach at least 20 cm, prefer soft and neutral to slightly acidic conditions, 23-27 °C, good filtration and an aquarium of at least 200 gallons containing plenty of submerged wood, clay pipes and cavities.

Claroteids may be bulky, but they are not known to be aggressive and can be kept with other medium to large sized fishes. Just keep in mind that any tankmates small enough to fit in their mouths would likely become a midnight snack!

## Claroteid Q&A

Q: Do you know of any claroteids that are suitable for the aquarium but rarely, if ever, seen in the shops?

A: By suitable for the aquarium I assume you mean small, attractive and relatively peaceful. There are several dwarf species that would probably adapt very well to captivity.

*Chrysichthys praecox*, from the acidic and blackwater Lake Mai-Ndombe (Congo) is adult at just a few centimeters. It comes in regulation dark brown but males develop the expanded cheek muscles and mouths of their much larger cousins all the same.

*Chrysichthys punctatus* has a bullet-shaped and muscular body peppered with black spots. These have a very wide distribution and rarely reach more than 12-15 cms, and occur in huge shoals so I expect they are tolerant of different water chemistry and each other. I've only ever seen preserved specimens, but they look so good they are probably a knockout in life.

Other dwarf species include *Chrysichthys okae* (scattered around the Congo) and *Chrysichthys aluuensis* (Nigeria and Cameroon) that would make a great addition to an African biotope aquarium.

Q: You mentioned that claroteids have been around for 45 million years but that changes in the Congo River have influenced the evolution of claroteids over the last 3-5 million years. Are the Congo species all young species or were they around before the lake drained?



A: Evolutionary biologists use differences between the DNA sequences of two or more species to estimate how long they have been independent from each other. Or put another way, when they split and became the different species we recognize today. The idea is that if their DNA is very similar, this split happened more recently than the split between two more distantly related species.

When I did this with the DNA of some claroteid sequences, I found that some species were quite young (2-5 million years old) and their splits coincided with the changing drainage pattern of the river, whereas others were much older (20-30 million years old) and may have coincided with some other climatic or geological event. So the answer is yes and yes; the current community of claroteids swimming in the Congo has been slowly assembled over a vast amount of time and contains both very old and very new species.

### Care and Maintenance

Most non-Tanganyikan claroteids should be very easy to look after in aquaria. They are tolerant of a wide variety of water chemistry, flow rate and even salinity.

In Nigeria, *Chrysichthys walkeri* is even grown in saltwater lagoons!

Provided you give them clean water of a suitable temperature (24-28 °C) and a neutral to slightly acidic pH, they will reward you with a zest for life to take the edge off any cold and wet night in November.

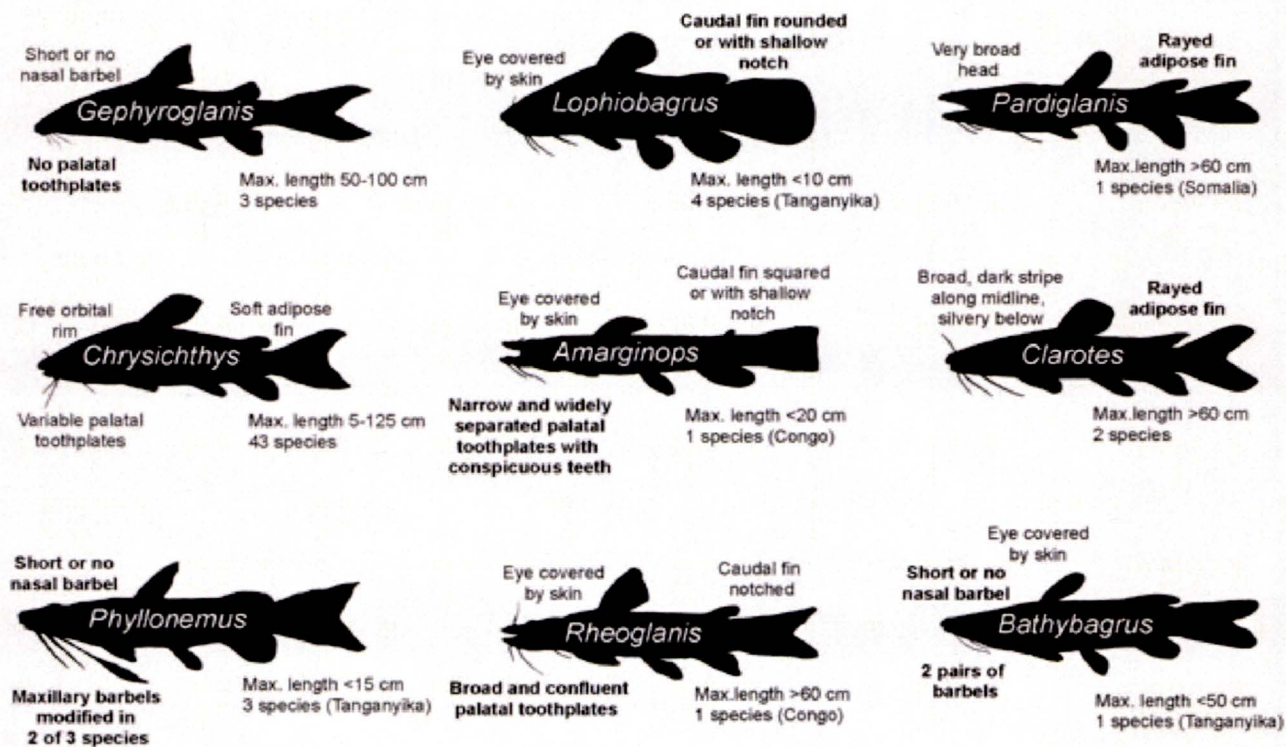
The only problem you are likely to find is getting hold of some in the first place. The number of species exported from Nigeria has been increasing over the past few years, but unfortunately, Congolese species are less common in the shops. Political instability, conflicts and unscrupulous suppliers have conspired to stem or stop the flow of wild-caught fishes from the world's second largest river system, most of which occurs within Democratic Republic of the Congo. This is bad news for aquarists because 560 of the 700 freshwater fish species in the Congo occur nowhere else!

The Congo is filled with fascinating and beautiful cichlids, characins and catfishes. For the sake of the hobby, and the people that live there, let's hope that peace and prosperity return soon.

### Claroteid Fact

Adult *Clarotes* and *Pardiglanis* have an adipose fin with a sharp spine and densely packed soft rays. This is a very rare condition for fishes with adipose fins (catfishes, characins and salmonids), and has little or no explanation.

### Key to Genera



Claroteid genera are quite easy to tell apart - once you know what to look for. Next time you are quizzed over a mystery African grunter, take a close look at the eyes, barbels, fins and toothplates, then impress your friends and enemies with this cheat sheet.

All images by Michael Hardman.



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## CSG Christmas meeting 11th December

Traditionally the CSG's Christmas meeting is held on the second Sunday in December, so as not to clash with members main Christmas commitments. At the meeting there will be a free Christmas buffet, provided for attending members. To make sure there is enough to go around we need to know in advance who will be attending, so will all members that are planning to attend please notify the Secretary by the 4th of December. [secretary@catfishstudygroup.org](mailto:secretary@catfishstudygroup.org)

We also plan to have a talk followed by a light hearted quiz.

## Catfish Study Group 33rd Annual Convention



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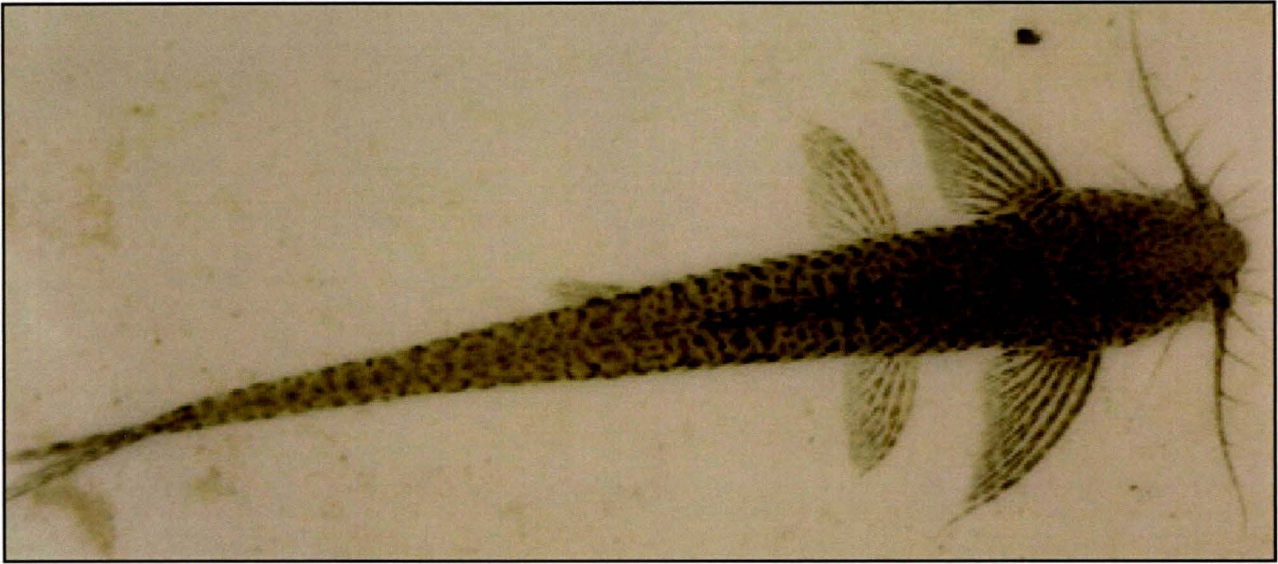


**16th-17th-18th March 2012**

For full details contact [ian@corydorasworld.com](mailto:ian@corydorasworld.com) or visit the CSG website [www.catfishstudygroup.org](http://www.catfishstudygroup.org)



## What's New? Mark Walters



*Apistoloricaria ommation* – Image by Mark Walters

There have been some very exciting imports in recent weeks and more unusual fish available through aquatic auctions. I picked up pairs of *Hemiodontichthys acipenserinus* and *Apistoloricaria ommation* from Pier Aquatics. Also on offer were unusual Dorads including *Amblydoras cf monitor*, *Hypodoras forficulatus*, *Anodoras grypus*, *Panaqolus 'L453'*, *Microglanis* sp. 'Peru'. I was pleased to buy some *Corydoras carlae* at the CSG September Auction and was surprised to see tank bred *Scleromystax lacerdai* on offer. Ian Fuller recently bagged an unusual species *Mastiglanis asopos*, in a Columbian shipment at Prestwood Petzone (West Midlands, U.K.). This small Heptapterid is similar in appearance to the 'shrimp catfish' of the *Imparfinis* genus.



*Mastiglanis asopos* Image Ian Fuller

### New Loricariinae Genus

A new genus and species *Fonchiiloricaria nanodon* has been described from the Rio Huallaga in Peru. Discussion on Planet Catfish indicates that it may have been imported in the past as *Loricaria* sp Yellow Tato and reaches a similar size to *Spatuloricaria*. Full details can be found in the paper:

Rodriguez, M.S., Ortega, H. and Covain, R. 2011. Intergeneric phylogenetic relationships in catfishes of the Loricariinae Siluriformes: Loricariidae), with the description of *Fonchiiloricaria nanodon*: a new genus and species from Peru. *Journal of Fish Biology*. 10.11.11/j.1095-8649.2011.03047

### Description of three new *Chiloglanis* species

A key to all described species within these two basins is presented, along with comments on the distribution and validity of nominal *Chiloglanis* species examined during this study. For a full description, refer to the paper: Friel, JP and Vigliotta, TR. 2011. Three new species of African suckermouth catfishes, genus *Chiloglanis* (Siluriformes: Mochokidae), from the lower Malagarasi and Luiche rivers of western Tanzania. *Zootaxa* 3063,

*Chiloglanis* are the second most diverse genus of the Mochokidae, after *Synodontis*. A number of species find their way into the hobby, although they are rarely available. This paper describes three new species from the lower Malagarasi and Luiche rivers in western Tanzania. Two of the species, *Chiloglanis igamba*, and *Chiloglanis orthodontus* are restricted to the Malagarasi basin. The third species, *Chiloglanis kazumbei* is more broadly distributed in both the Malagarasi and adjacent Luiche basin.





# G.B.W

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