

# CAT CHAT

The Journal of the Catfish Study Group (UK)

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Dear Members

Thanks to those members who sent messages to me about the standard of the first volume of Cat Chat. However, I should just like to point out that it is the articles that make it what it is, I only design it to make it readable. I hope that people will continue to send articles to me now that I am officially the Editor.

I am sadly lacking in the 'Meet the Members' department. All I want is a few words on how you started and what you keep. You only have to read this issue to see the sort of thing we want. If the article is of no interest to you, let me know and it will be discontinued in the near future. The committee

thought that it was a good idea for members to know what everyone else keeps. At least you will get to know who keeps the same sort of fish you and that there is someone to contact if you have a problem. Not everyone keeps a fish of every species.

Articles and pictures can be sent by e-mail direct to <[bill@catfish.co.uk](mailto:bill@catfish.co.uk)> or by post to

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Ed

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## ACKNOWLEDGEMENTS

Many thanks to the people who supported the annual Convention 2001 including the Catering Department for their hard work and brilliant service. A special thanks to our speakers Dr Isaac Isbrücker (especially for stepping in at such short notice) and Chris Ralph.

Front Cover:            Designed by Kathy Jinkins.



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# FISH COLLECTING EXPEDITIONS



## Part 2



Steve Pritchard took a group of CSG members with him on one of these trips to Peru last year. This trip was one of the Convention talks in February. If you want to know more, please contact Steve at his e-mail address (inside the front cover) or write to him through our membership list.

**16-23 June 2001**

### **JIM LOVINS' GREAT AMAZON FOREST ADVENTURE AND TROPICAL FISH STUDY EXPEDITION #2**

Pamacari Riverboat/Field Stations. From Iquitos, Peru: \$1245.00 per person

Please see description of previous trip (above). A second opportunity to explore and fish the Amazon rainforest under the guidance of **Mr. Jim Lovins**. If you want twice the fun, go on both trips, and have a full weekend to spend exploring Iquitos and the surrounding area! Add \$895.00 to extend from the previous week.

**23-30 June 2001**

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Pamacari Riverboat/Field Stations. From Iquitos, Peru: \$1245.00 per person

Please see description of previous trip (above). A second opportunity to explore and fish the Amazon rainforest under the guidance of **Mr. Jim Lovins**. If you want twice the fun, go on both trips, and have a full weekend to spend exploring Iquitos and the surrounding area! Add \$895.00 to extend from the previous week.

**14-21 July 2001**

### **RIO OROSA AND APAYACU TROPICAL FISH COLLECTION AND STUDY EXPEDITION**

M/N Amazon Explorer. From Iquitos, Peru: \$1295.00 per person

Sailing from the Port of Iquitos, Peru aboard a classic Amazon riverboat with experienced crew and guides. An excellent opportunity to study and collect tropical fish under the direction of **Dr. David Schleser**, internationally-recognized expert on Amazonian fishes, former curator of the Dallas Aquarium, nature photographer and author. We will visit a wide variety of aquatic habitats in the Rio Orosa and Rio Apayacu regions, including black-water lakes (cochas) and jungle streams and pools, white-water rivers, Amazon River sand/mud flats and more. Opportunities for jungle hiking, photography, visits to native Yagua Indian communities and much more. Visit to a tropical fish exporting facility in Iquitos. Informal daily lectures on aquatic biology/tropical fishes by Dr. Schleser

**21-28 July 2001**

### **RIO MARANON AND TIGRE TROPICAL FISH COLLECTION AND STUDY EXPEDITION**

M/N Delphin. From Iquitos, Peru: \$1295.00 per person

Sailing from the Port of Iquitos, Peru aboard a classic Amazon riverboat with experienced crew and guides. An excellent opportunity to study and collect tropical fish under the direction of **Dr. David Schleser**, internationally-recognized expert on Amazonian fishes, former curator of the Dallas Aquarium, nature photographer and author. This expedition will travel upriver on the Amazon to the confluence of the Marañon and Ucayali Rivers, and up the Marañon to the Rio Tigre. We will visit a wide variety of aquatic habitats in the area, including black-water lakes (cochas) and jungle streams and pools, white-water rivers, Amazon River sand/mud flats and more. Opportunities for jungle hiking, photography, visits to local communities and much more. Visit to a tropical fish exporting facility in Iquitos. Informal daily lectures on aquatic biology/tropical fishes by Dr. Schleser. Add \$895 to extend from previous expedition.

**18-25 August 2001**

### **TROPICAL FISH COLLECTION EXPEDITION TO THE MARANON AND TIGRE RIVERS**

Pamacari Riverboat/Field Stations. From Iquitos, Peru: \$1245.00 per person

Travel upriver from the city of Iquitos to the beginning of the Amazon River itself; the junction of the Marañon and Ucayali Rivers. A wonderful opportunity to collect fishes from ichthyologically unexplored rivers, lakes and streams under the guidance of **Dr. Devon Graham**, scientific director for Project Amazonas, Inc. Low water levels at this time of year may make it difficult to access some more remote lakes and streams, but low water is also the best time for collecting large numbers of fish as they are much more concentrated in the remaining bodies of water. Dr. Graham has been visiting the Peruvian Amazon since 1996, and currently spends several months of each year in this fascinating part of the world. Many of his Amazon visits have been in association with tropical fish collecting expeditions

**19-26 January 2002**

### **TROPICAL FISH COLLECTION AND STUDY EXPEDITION TO NAPO AND TACSHACURARAY RIVER AREAS: TRIP#1**

Motor Vessel Delfin or Pamacari Riverboat. From Iquitos, Peru: \$1295.00 per person

**26 January-2 February 2002**

### **TROPICAL FISH COLLECTION AND STUDY EXPEDITION TO NAPO AND TACSHACURARAY RIVER AREAS - TRIP #2**

Pamacari riverboat/field stations. From Iquitos, Peru: \$1245.00 per person



# From the Chair



Welcome to the first issue of 'Cat Chat' 2001, I hope you all enjoy what has been put together for you. I must admit it is not easy to maintain a consistent supply of quality features; my thanks go to those people who have supplied us with the top rate pieces that you have seen so far. We are always looking for Catfish information to publish no matter how large. Little snippets of information are invaluable, especially feeding and habitat tips which can save many months of trial and error and even unnecessary fish losses.

**December** was the final meeting of 2000 with our traditional informal free 'Hot Pot' snack. This was followed by a talk with slides on Corydoras species by your truly.

**January** As usual, the first meeting of the current year is the AGM, (the meeting every one tries to avoid). This years meeting was reasonably well attended. Changes to the committee include Ann Blundell taking over as Honorary Secretary from Bill Hurst who had been doing the job for a number of years and Bill taking over officially as the Editor of the journal. A full copy of the minutes has been included with this issue of 'Cat Chat'.

**February** The annual Convention. What a day it was. The weather was awful, fog everywhere. Because of the weather conditions the start was delayed to give people a little extra time to arrive.

Proceedings got under way at eleven thirty with a few words of introduction from our Honorary President and then it was Brian Walsh who gave us one of his superb audiovisuals. The first talk was presented by Dr Isaac Isbrücker from the University of Amsterdam, who had agreed at very short notice to come over as a replacement for his friend Erwin Schraml who had to withdraw due to a family bereavement. I sincerely hope Erwin will be able to make it over in the not to distant future. The subject of the first talk was Wood Eating Catfish, with Isaac using the slides that Erwin had previously prepared and sent to him. After a light lunch and much cat chat the second talk, Peru 2000, was given by Chris

Ralph, one of the group of CSG members who went on a fish-collecting trip to Peru. The final talk was Isaac again with an informative talk on newly imported catfish, again using slides provided by Erwin.

Once the talks were finished and all the questions asked and answered, both of our speakers were presented with complimentary memberships for one year and little momentum for their services, in the form of two wonderful woodcarvings. A Gold nugget (*Baryancistrus* L18) for Chris and a pair of *Corydoras geoffroy* for Isaac, which had been made by our very own specialist in all things wooden, Brian Walsh.

The final act of the day was to draw the raffle and I think it is only fitting to thank Terry Ward for his superb effort in selling all of his supply of tickets, something that he has not quite managed in the past. Look out next year, I hear he has booked twice the amount. My thanks must also go to everyone else who helped to make the day so successful, especially the guys and gals in the canteen who at times were under tremendous pressure. All in all it was a great day, "follow that" someone said and I can assure you we will try our very best to do so.

Ian Fuller

## FORTHCOMING EVENTS

April 15

### DRIFTWOOD CATS

Table Show and talk/slides by Allan James  
of SCOTCAT fame

May 20

### CORY'S, STARTING FROM SCRATCH

Table Show and talk/slides by Ian Fuller

June 17

### DORADIDAE

Table Show and talk/slide by Trevor Morris

All Meetings at St Elizabeth Parish Hall, Aspall



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# Catfish from Peru

Stephen Pritchard (December 2000)

**This is not a comprehensive list of all the catfish from Peru, nor is it a document that describes all the catfish caught in Peru on the trip we took in July 2000. It is a summary of the species that I have brought back from Peru and a little about their progress since arriving in my fish house.**

Starting with the Corydoras, we were fortunate enough to find a group of *Corydoras elegans* in the clear water creek on that runs through the Madre Selva 2 reserve on the Rio Orosa. Both Jools and Allan, especially Allan, were in 'Catfish heaven', net after net contained plenty of these delightful cory's.. I brought a dozen back and they are doing well sexing out now I have set up a breeding tank and put a trio in the tank to give them a go.

Back in Peru the local peoples have become aware of the 'fish people' trips on the rivers and as the boat arrives at villages and various stopping points on our journey villagers come to trade bringing bowls of fish they have caught and mostly catfish, at one such meeting a number of small *Corydoras trilineatus* were offered for a tee shirt or two, major currency in the areas away from Iquitos. These fish are doing well and growing fast although not as big as the *C. elegans* but then they were very small when traded, I hope to get these fish to breed next year, (I'm writing this as 2000 comes to an end)

While on the cory's I must mention the species I caught in good numbers in 1998 *Corydoras acutus* these were caught in a 'cocha' that we were unable to get too this time because increased water level, some 3 to 4 feet higher than before, although when in the exporters there were plenty to buy. I did not purchase any as the ones I brought back last time are waiting tank space for a breeding attempt but I did buy some *Corydoras fowleri* when leaving Peru. Packed five to a large bag because 'they do not travel well', only 20 to a box when exported combined with a the very high price per fish means they cost a lot to get to the UK, so if you see them for sale in your retail outlet do not be surprised at the price.

A number of Bristlenoses were caught on the trip but just one from here and one from there so I decided to buy 5 from the exporter when we left. Staying for just over two weeks gave me the benefit of visiting the exporters on three separate occasions. Picking small fish they all travelled home successfully and are now growing up in a 24x12x12 bristles are starting to develop so

I will be looking to re-house them in a larger tank shortly. Unfortunately I cannot identify the species but I hope I'll breed them and then get some of the fry to a catfish auction.

In 1998 we were going to 'catfish alley' where in previous trips plenty of catfish have been caught both *Brochis splendens* and *B. multiradiatus*, having a desire to keep and hopefully breed *multiradiatus* this was truly an excursion I wanted to be on, as with all trips you cannot guarantee want your catch, and I did manage to collect one *Brochis splendens*, the only one of the trip. 2000 a different story we were catching *Brochis splendens* all the time, no *B. multiradiatus* unfortunately again these fish are doing very well and I have passed some on to other members in the hope of getting them to breed.

With the debate about *Brachirhmdia* vs. *Pimoldellia* I will call this sp of *B. marthae* because this is as near as I am willing to go at present. When these were caught the initial thought from David Schleser was *Corydoras pygmaus* as we all (about twelve of us) bobbed about in the skiff catching as many different fish as we could, I ended up with five very small specimens no bigger than a *C. pygmaus*. In a 24x12x15 without lights they were moving about all over the place eating all that could be put in front of them. Now in a 48x12x15 in reflected light from the big tank they are more secretive keeping hidden beneath the bog wood, I will move them into another darker tank in the near future so I hope to see more of them. While they could be *B. marthae* they have an additional dark blotch on the side behind the pectoral fin, which needs some further investigation.

While in the exporters I did see a nice tank of small panaque sp and purchased 5, all survived the trip home and look like L90 in the Aqualog book Loricariidae all L numbers, they are all living in the same tank as the *B. marthae*, eating cucumber, sinking pellets and frozen foods although I would like to see more growth on them than I'm getting at present, when I have a change round I'll try increasing the water flow and oxygen levels as they keep to the filter outlets



most of the time. One point with the cucumber is that they don't eat very much of it although when I say that what seems to happen is they don't touch any for a few feedings, I remove the cucumber the day after putting it in the tank, then a few days later they will devour a piece, has anyone any experience/advice with L90's?

Another Pim species caught on the second week took my fancy again a very small pim wouldn't take up too much room in the box, so home it came I was thinking *P. gracilis* type but it soon began to grow and grow and now looks like a *Rhamdia*, possibly *R. wagneri* and as it has grown more than 5 inches in less than four months I'm going to look for a bigger tank for it to go in although at present it is sharing a tank with some of the Cory's and Brochis with out causing any harm it eats well, dining on pellets, frozen foods, lob worms and Moro worms (a large beetle larvae)

In various nets during one trip on the second week up the Rio Ucayali we caught three sucker-mouth probably from the genus *Loricarichthys* and as David sands' book catfishes of the world vol 4 lists two separate species from the river they could be either *L. chanjoo* or *L. ucayalensis*. The three are housed in a 24 x 24 x 12 with inter-

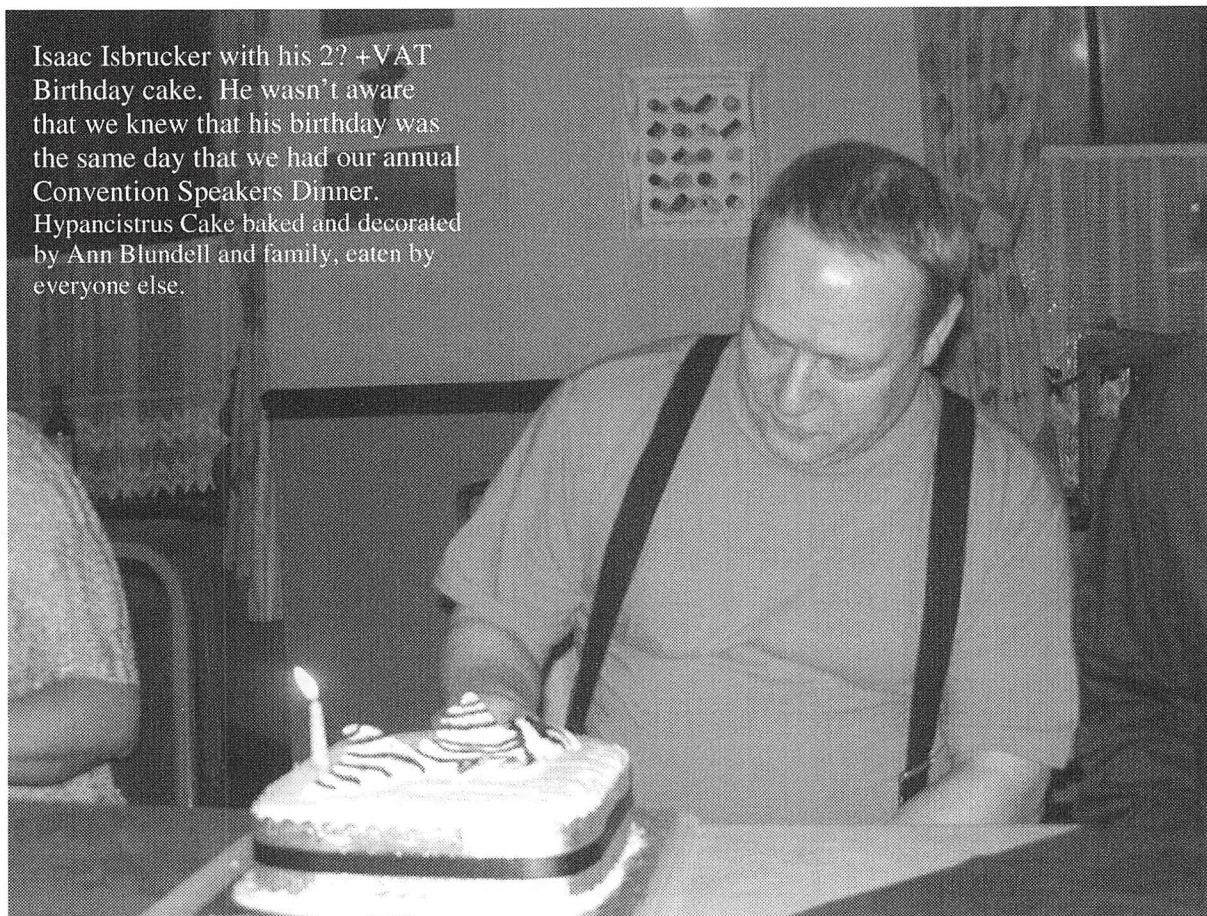
nal power filter providing the fast flowing water, they have grown and judging by size and body shape I have two males and a female again another tank move is required to get them into a breeding tank.

Last trip I turned down a *Callichthys callichthys* that was returned to the water as no one want it this time even though only one was caught I brought back a *Hoplosternum thoracatum* in fact a very small *Hoplosternum thoracatum* at less than an inch total length the colour on this fish is amazing and it has now grown on well it's over 3 inches total length

This is just the catfish I brought back; there were at least six other catfish members on the trip all with their own boxes containing different species of fish.

There is something to be said about collecting your own fish other than 'it's fantastic!' you do need a lot of tank space when growing up the fish you bring back. While I have only mentioned the catfish I have all the others; silver dollars, pyrrhulina's, characins, dwarf cichlids and killies that are growing well, I did try to limit myself in what I brought back. Anyone interested in going in 2002?

Isaac Isbrucker with his 27<sup>th</sup> +VAT Birthday cake. He wasn't aware that we knew that his birthday was the same day that we had our annual Convention Speakers Dinner. Hypancistrus Cake baked and decorated by Ann Blundell and family, eaten by everyone else.







## MEET THE MEMBERS

### Julian Dignal

The CSG Web Site Manager

Keeping fish is something I've done since I first started getting pocket money. It alarms me to think how long ago that is now but I'm comforted that, for many other aquarists, this stage in their lives is even further in the past. Given my innate Scottish approach to money gathering I was first to buy a goldfish and, indeed, soon thereafter - a tank to keep it in. I am proud to say that, realising my lack of knowledge on the subject of fish keeping; my next purchase was a book (albeit on fancy guppies).

The following Christmas brought my first tropical set-up and with it a truly entertaining family effort in group assembly. My first catfish (a Striped Talking Catfish acquired for the seemingly vast sum of 6 weeks pocket money) followed and I was off. Despite lengthy periods during my adolescence where computers and girls fought for my attentions, I always had a fish tank or two. They proved, by far, the most reliable interest during that period but the other two pursuits certainly paid off in the long run.

After leaving school I followed a course in computing and worked in a local Edinburgh aquatic outlet. The later taught me much about the trade and I even learned a thing or two about fish. I always look back on those shifts in very rosy terms although most of it was spent advising people that those lovely pim pictus were not a good idea with those neon tetras and that banjo catfish were really quite interesting if you just gave them a chance.

Given all these fish passing through the shop I had an excellent opportunity to decide what sort of fish really interested me. If you work with fish all day long and still have time for those at home you know you must be hooked. Despite excursions into discus land (I'm still quite fond of cichlids) catfish remained at the fore and I guess my favourites were all these new Loricariids that kept turning up. This was an exciting time, way before Aqualog, when we first saw zebra plecos (at £200.00 each) and many others of the now common 'L' numbers for the first time. A great many African catfishes also passed through the shop along with large pims such as *Brachyplatystoma* and the more usual shovel-noses and red-tails. Looking after these fish for a while but not having to plan for their eventual adult size was another of the good bits.

Around this time I moved to work for another shop and also started playing around with the Internet. As an aside, it was via the Internet that I first encountered L-numbers (or TR-numbers as they were first called). The logical progression for me was to start up a site dedicated to catfish. Work started on this project in early 1996 and in November I unleashed the site to an unsuspecting online world. Actually if anyone was unsuspecting it was me.

Graduation brought regular (i.e. paid) employment and eventually I got a place of my own. I had three fish tanks in before I even thought about the sofa. These tanks contained many different Loricariids, mostly belonging to the Ancistrinae sub-family, along with my treasured black lancer and a few Corys and Doradids and the odd Syno or two.

The catfish Internet site soon built up a regular following and, as I write this, has been visited over 170,000 times. Currently about 3000-4500 pages are viewed every day worldwide. Early in 1998 I had to move it to cope with the increased demand and at that time I christened it "Planet Catfish". Many of the visitors to the site became regular contributors. The CSG chairman, Ian Fuller, first emailed me a couple of years ago with an email along the lines of "Hello I'm Ian - I like Corys but I'm still getting up to speed on this computer lark". Fellow Scot Allan James also came in regular contact and it was only a matter of time before I started making the regular journeys South to Wigan to meet these people in the real world.

Shane Linder, known to CSG members for his authoritative articles on Asian Catfishes, sent so much information that I had to set-up a section for him at the site. Others such as Lee Finley, Erwin Schraml, Jon Armbruster and Ingo Seidel all emailed me advice, articles or just plain encouragement in one way or another. It was the contact from all over the world that was unique to this new form of communication. Imagine my delight when an email arrived from Australia with some pictures of *Neosilurus* catfish caught by a schoolgirl in a local creek. This sort of thing has been repeated time and time again with Asian and South American breeders, exporters and enthusiasts joining in left right and centre. Primarily it is the hobbyists with digital or conventional cameras and scanners that just keep



# Excerpts from a Fish House Diary

## December 2000

First I had better tell you a little about the fish house, it all started with a single tank in doors followed by a trip to Peru and a lot of fish to find homes for and the temporary accommodation in the garage was not big enough, my fish just keep growing.

The only place I could put a fish house was at the bottom of the garden an area dominated by a Horse Chestnut tree. It had shown signs of disease with fluid weeping from the trunk and as luck would have it a neighbour was having some tree surgery undertaken at the time. I asked the surgeon to have a quick look and give me a quote, he confirmed the problem in the trunk and gave me a quote. Just before the buds burst last year (March 1999) the tree started to come down. The area was clear for what I originally thought would be a wooden shed, it would be nice to have a shed with a bit of bending room, my previous shed was 8x6 and not enough room to see the fish on the lower levels with ease. Enter my neighbour Barry, who was just finishing his house extension and had built a number of garden constructions, including a Koi pond that took over 25 skips to clear the hole. He suggested a block built fish house, something I had not thought about but that's what we ended up constructing.

### Meet the Member (continued)

sending me pictures. I never know what's going to arrive in my inbox from one day to the next.

In the real world the majority of fish I'm currently keeping are those brought back from a recent (my first) collecting trip to the Peruvian amazon. Again arranged through online contacts. These include (in no order) *Hypotopoma* spp., *Rineloricaria* sp., *Corydoras elegans*, *C. ambiacus*, *Brochis splendens*, *Dysichthys coracoideus*, *Amblydoras hancocki*, *Anadoras grypupus*, *Hassar notospilus*, *Lamontichthys filamentosus*, *Leptodoras linnelli*, *Megalechis thoracata*, *Opodoras leporhinus* and *Trachydoras paraguayensis*. Aside from the recent Peruvian imports there are a whole bunch of L numbers and other bits on. I've just finished converting a small room in my house to a fish room proper, so I hope to add more catfish from around the world soon.

The sheer amount of information amassed on the website in just 4 years is amazing and it feeds that which is my favourite aspect of the hobby. Learning. To me sitting in front of a fish tank is learning. You observe and learn - fish are great teachers I think. It seems only natural to pass on this donated knowledge and combined experience via the website that, from a certain point of view, is just one big aquarium.

Weekend construction takes time, it was not until the 9<sup>th</sup> December the first fish moved into the new fish house, there were a few memorable moments during the preceding months, Ian will remember laying the concrete base on the hottest day of the summer. The roof 'A' frames went up during the wettest period of the year with sudden downpours leaving an inch of water inside the fish house. There were 'opportunities' along the way, the house is 'L shaped' how do you join two roofs at 90 degrees and different heights, will the walls be strong enough to take the weight and other problems that had to be thought through. These little challenges were overcome, apologies to any builders out there but the roof is still up and the rain don't come in...yet!

Getting the tank into the fish house, and onto the concrete pillars that are the stand for this monster, well it is to me, was the first problem but with a bit of brute force and ignorance it's in the shed. The tank measures in at 80 inches by 24 inches by 24 inches and it took some five hours to fill by hose, that was at the beginning of December 1999.

The nice problem arose what do I keep in it, is it the tank for my *Synodontis* breeding attempt? or big South American cichlids or what about trying to breed some nice *Tilapia buttikoferi*?, another long time favorite, or.... the list of 'what ifs' will go on and on, in the end I decided to get a few hardy fish in to set the tank on it's way through the 'new tank' cycle.

Rosy barbs were the first residence in the tank four brought from Mr. Fish on 9<sup>th</sup> December, the first fish to move into the fish house and hopefully a breeding project of the future. Anyone who knows Alan's tanks at Mr. Fish will know they are not the standard size they give the fish plenty of room but wow! when they were released into the tank they were here there and every where exploring their new found freedom. Having to work for a living I did not go out to the fish house again until the following night. There they were all four still swimming together up at the front of the glass waiting for me, in goes some food and their straight to it eating well, I thought I might add some more fish but I would wait until the weekend. In the mean time the Rosy's could have free reign. The females were well rounded and the males attentive so eggs were scattered, I knew this only by the change in girth of the females. I did not know if any would survive, find anything to eat, avoid being eaten, so in effect forgot about the breed-



ing until I had a separate breeding tank ready.

I had some nice little barbs, *Barbus bariloides*, that I had been keeping in a 24 by 8 by 8 they were only small and Terry in Wholesale Tropicals said that they were difficult to get any body on but these were fine and a definite breeding project as soon as space allows. They moved into the new tank and almost immediately began to swim with the Rosy's. Soon the tank had a number of catfish, well are you surprised. And my *Mylossoma duriventre*, it was a fight getting the fish to go calmly but once in the tank it seemed to take a good stretch and flex it's muscles as it quickly explored the freedom of it's new domain. After a good swim round *Mylossoma* reverted to it's usual hiding under floating plant (put in specially for the purpose) preferring to move around the tank when the main lights were out.

In early January and to my surprise as I feed the fish out popped a small barb then another, I had half a dozen quarter inch rosy barbs swimming about just above the Java fern. As soon as any of the other fish came close they dived back into the protection of the plant. I knew the parents had spawned during the first day in the tank because the females had slimmed a great deal but I did not think I would be able to raise any of the young.

In February the fish in a 48 by 15 by 15 were transferred into the big tank to allow space for some Rift

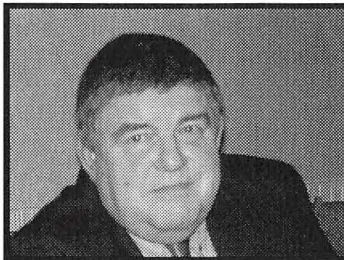
Valley cichlids that I hoped to get but as luck would have it I did not get the cichlids so I had an empty tank ready for the next opportunity that came along.

The lighting for the big tank starts with a 15 inch tube set on the ceiling of the shed that with the use of various time switches is followed by the three 48 inch tubes which provide the main lighting for the whole shed and then a couple of hours later the Metal Halide light directly above the tank this brings in the sunlight and the warmth.

Over the next few months I'll be putting a few notes together about the happenings in the fish house and hopefully some of the spawnings.

After feeding I turned the fish house lights to the twilight setting (just one 15 inch tube on the ceiling) straight away the *Synodontis multipunctatus* start to move around the tank first one comes out into the current from the power filter. First one then two until all four are at the food, I think to myself 'they have a lot of growing to do before I can hope to breed them' they are between 3cm and 4cm standard length at present.

My *Corydoras sterbai*, *pygmaus* and *hastatus* have given me a number of fry this year along with plenty of Rosy barbs and with the increase in fish the trip to Peru this year I hope to produce a few more fry for the auctions in 2001



## MEET THE MEMBERS

### Roy Barton

CSG Librarian and Auction Organiser

I returned to the hobby in 1994 after a long absence of about twenty years. The first thing I noticed when I started to set up was the selection of much better equipment. No more making filters from old containers and the like. There was a huge selection of 'new' fish that had been introduced into the hobby, which made the choice more difficult. Eventually I decided I liked the wide range of catfish that were available.

I eventually joined the Northern Area Catfish Group which specialised in my interests and became a Committee Member. When we changed the name to the Catfish Study Group (UK), I remained on the Committee because I can only see us going forward. I am also a member of my local fish club in Preston which I enjoy, although

the interests there are much more varied.

At present I have 1 x 4', 2 x 3' and 2 x 2' aquariums. All have internal filtration. My aquariums at present hold fish that will live together, community type but not of the 'normal' variety.

Each aquarium contains catfish of some description including *Corydoras*, *Banjós*, *Synodontis*, *Platydoras*, *Loricariids* and two tyre track eels. I also have a good supply of Apple Snails which help with the detritious.

In the future I hope to acquire more aquariums, wife permitting. I shall always have a community aquarium but I would like to have tanks to experiment with, for breeding and growing on show fish.



# The fry patterns in the South-American catfish genus *Corydoras*

(Pisces, Siluriformes, Callichthyidae)

Ian Fuller

Key words: *Callichthyidae*, *Corydoras*, development, colour pattern, South America

## ABSTRACT

The fry pattern of aquarium-bred species of the South-American catfish genus *Corydoras*. Contribute to discriminate between species of the so-called 'acutus'-group., showing a greyish adult colour pattern.

## INTRODUCTION

Identifying many of the *Corydoras* species can be extremely difficult and none more so than the long – snouted members in, the so-called 'acutus'-group (sensu Nijssen & Isbruckner, 1980) which show greyish adult colour patterns. Although there are about twenty species within this group, seven species were successfully bred under controlled aquarium conditions. It is demonstrated that the colour patterns change during the fry's three to four month period to adulthood and maturity.

It was thought that juvenile colour patterns might be an additional character with which to differentiate between the different species. This was demonstrated earlier with two of the short-snouted species of *Corydoras*: *C. rabauti* (La Monte, 1941) and *C. zygatus* (Eigenmann & Allen, 1942). That were considered as one species by many authors, until breeding experiments by the author (Fuller, 1983a) revealed that these two species possessed totally different body colour patterns during their larval stages.

## MATERIAL

The seven species involved are: *C. acutus* (Cope, 1872): 4males-2 females, *C. blochi blochi* (Nijssen, 1971): 2 males-4 females, *C. septentrionalis* (Gosline, 1940): 3 males-2 females, *C. treitlii* (Steindachner, 1906): 2 males-2 females, *C. amapaensis* (Nijssen, 1972): 3 males-1 female, *C. ellisae* (Gosline, 1940): 3 males-3 females, and *C. stenocephalus* (Eigenmann & Allen, 1942): 2 males-2females, all obtained from aquarium fish importers.

The fry colour patterns are recorded in line drawing form, and were made when the fry had reached the age seven days and twenty-eight days respectively, and at the time when they reached the pattern of an adult female. The adult female pattern was chosen as the datum point at which fry are deemed to have reached their adult coloration. (Fig 1-7).

## METHODS

All seven species were bred in aquariums of similar size (length 45cm, width 35cm, height 30cm), with similar furnishings. All seven species spawned in a very similar way following a pre-determined sequence of events.

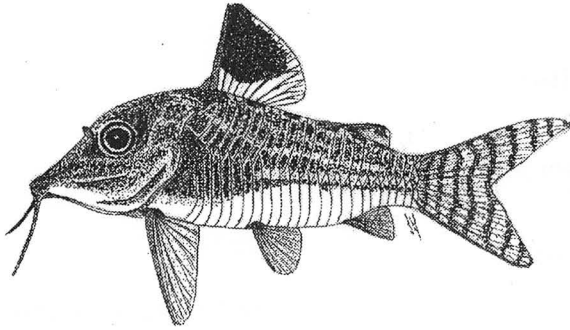
The sexual activity starts with a male of the species actively pursuing one of the females until she submits to his attentions, at which point she reverses rolls and pursues the male. The male then takes on a quivering arched sideways stance, allowing the female to push headfirst into the side of his body, at a point just above and slightly in front of the ventral fins. At the moment of contact the male grips the female by clamping across her barbels with his pectoral fin spine, holding her firmly against the side of his body. The grip is maintained until the male has stopped quivering, this grip being referred to as the 'mating clinch'. Both fish then separate with the female actively cleaning various sites around the aquarium before depositing her eggs, the male being in close attendance all the time and ready to mate. During the mating clinch which may take place at all levels in the aquarium from the substrate, in amongst the plants and spawning mops to mid water, the female will deposit her eggs into a pouch made by pressing her ventral fins together. When a pair of fish mate in mid water and after the male has stopped quivering, they drift to the substrate where they may rest for several seconds before separating. No method has yet been devised to successfully determine how and at what point the eggs are fertilised.

In each of the seven species spawning activities the none participating fish were left in the aquariums with the spawning pairs and in all seven cases the none participating females showed no interest at all.

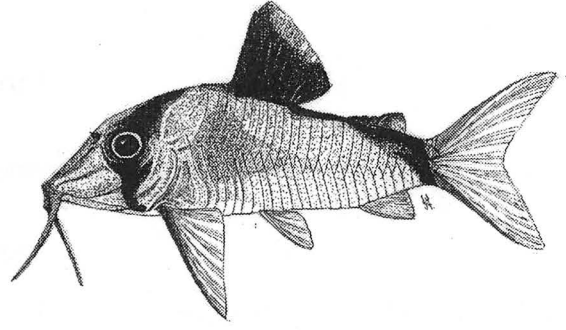
The males however persisted with their attempts to mate with the active female, in all seven cases the first male selected by the female made sure that he was



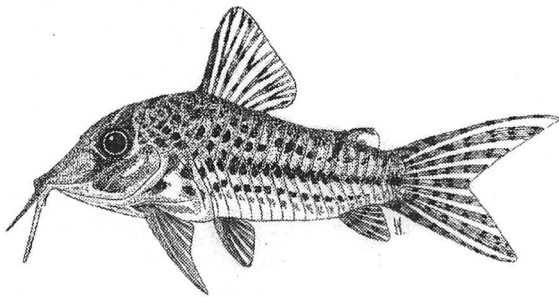
Figs. 1-7 Adult Colouration (female)



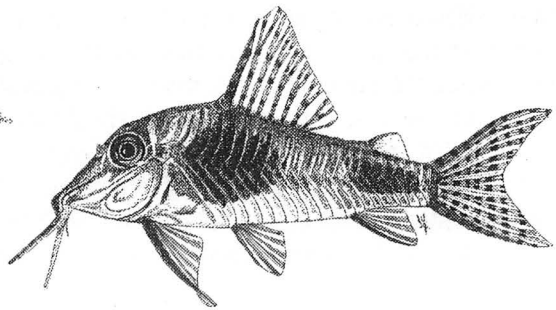
*C. acutus*



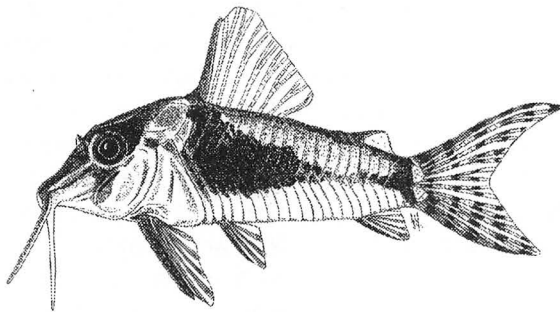
*C. amapaensis*



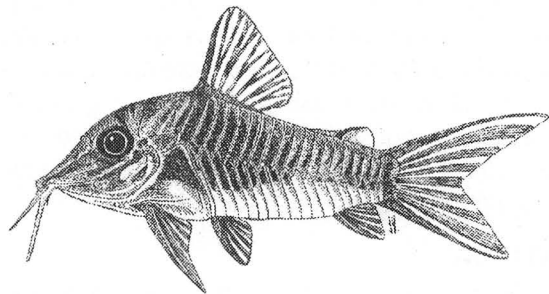
*C. blochi blochi*



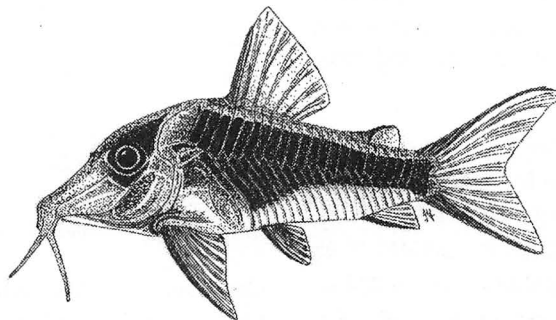
*C. ellisae*



*C. septentrionalis*



*C. stenocephalus*



*C. treitlii*  
12



**Table I.**

Water conditions of the tanks during the time of spawning of seven *Corydoras* species.

pH (Pondus hydrogenii) = acidity / alkalinity; neutral measurement = 7.

GH (General hardness = total hardness, measured in degrees dH) is a measure of all dissolved salts. 0-5 = soft, 6-10 = medium, 11-20 = medium hard. .

KH (Carbonate hardness) a measure of (bi)carbonates.

Temperature recorded in degrees Celsius.

	pH	GH (dH)	KH	Temp
<i>Corydoras acutus</i>	7.2	12	2	21,1
<i>Corydoras amapaensis</i>	7.4	14	1	23,3
<i>Corydoras blochi blochi</i>	6.8	10	3	25,5
<i>Corydoras ellisae</i>	7.0	9	1	23,3
<i>Corydoras septentrionalis</i>	7.4	8	1	23,8
<i>Corydoras stenocephalus</i>	6.8	10	3	25,5
<i>Corydoras treitlii</i>	7.4	12	2	22,2

always between her and the other pursuing males. With all seven species after spawning activity had ceased the adult fish were removed.

### CONDITIONS

None of the seven species showed preference as to the level at which to deposit their eggs, with eggs being deposited close to the substrate and to within twenty millimetres of the surface.

The fry of all seven species take from between eighty-five to one hundred hours to hatch (Table II) depending on the water temperature. Although the temperature is not a controlling factor it does have a slight bearing on the developing embryos. For example, *C. acutus* that spawned at 21,1 deg C. and took between ninety and one hundred hours for all of the fry to emerge. When spawned at 23,9 deg C. they would hatch in eighty-five to ninety five hours, but at 26,5 deg C. they still take between eighty-five and ninety five hours to hatch.

Of the seven species bred five, - # *C. acutus*, *C. ellisae*, *C. septentrionalis*, *C. stenocephalus*, and *C. treitlii*, # - preferred to deposit their eggs in either Java Moss or the woollen spawning mops. The remaining two, *C. amapaensis*, and *C. blochi blochi* divided their eggs evenly between the tank sides and the clumps of Java Moss.

The growth rates shown in the following table are an average taken from ten specimens to the nearest 0.5 mm.

By the seventh day after hatching the fry of all the seven species, have developed their own distinctive colour patterns. (Figs. 8-14) Five of the species (*C. acutus*, *C. amapaensis*, *C. blochi blochi*, *C. septen-*

*trionalis* and *C. stenocephalus*) all show patterns that are rather similar to each other. *C. ellisae* and *C. treitlii* have exactly the same patterns as each other, differing from the other five species by having no markings along the sides of the body.

As the fry of the seven species grow and develop, their colour patterns are constantly changing and reach a maximum intensity by the time they are four to six weeks old. The pigmentation forms into irregular markings that cover most of the fishes body, giving all seven species a dark blotchy appearance especially when viewed from above, as shown in Figs. 15-21. From six weeks onward the ever changing colour patterns of the fry, start to develop into the more recognisable patterns of the adult female.

By the time the fry of all seven species are aged between eight and ten weeks old, they will all have attained the colour pattern shown by adult females, as demonstrated in Figs. 1-7.

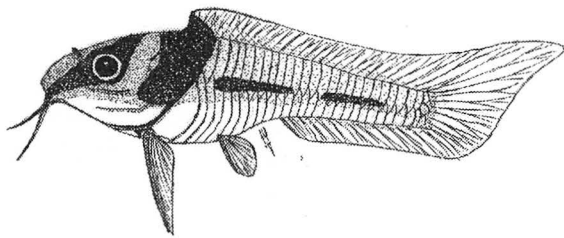
The effect of water temperature on all the fry's growth rates, is very much the same as on egg development. More importantly water quality does have a positive effect on growth rates. Water quality that had been allowed to deteriorate through contamination from excess build up of the fry's waste matter effectively retarded growth, it is thought that permanent growth damage would occur if conditions were allowed to prevail for any length of time. To maintain maximum fry growth rates daily 30% water changes were made.

### DISCUSSION

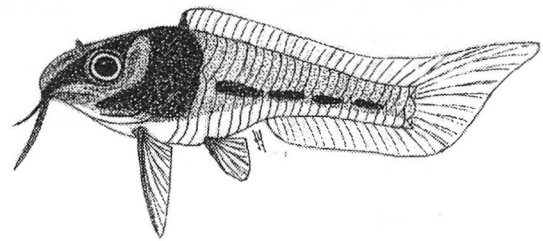
Adult female coloration was chosen as the time at which fry were deemed to have reached adulthood. This was because with other species of *Corydoras* e.g. *C. barbatus* (Quoy & Gaimard, 1824) that have been



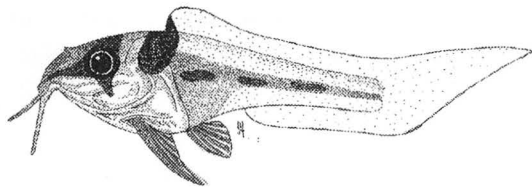
Figs. 8-14 7 DAYS



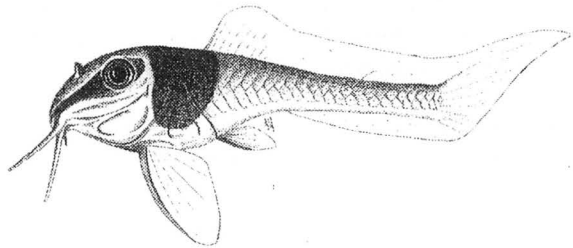
*C. acutus*



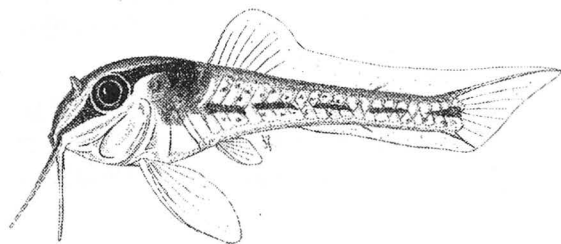
*C. amapaensis*



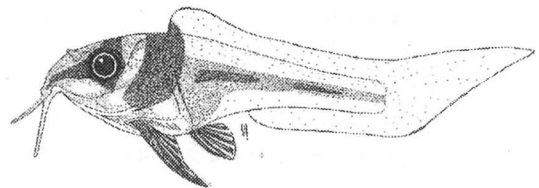
*C. blochi blochi*



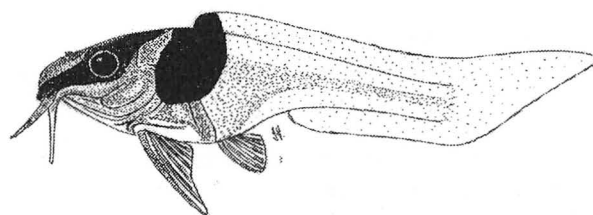
*C. ellisae*



*C. septentrionalis*



*C. stenocephalus*



*C. treitlii*



Table II.

Details of egg production of seven *Corydoras* species. Per column: total number of eggs, diameter, number of eggs laid at a time, adhesion, and time to hatch. The adhesion (how well they stick) is a value of personal rating out of 10.

	number per female	diameter in mm	number laid at a time	adhesion	time to hatch
<i>C. acutus</i>	40	1.5 mm	2 – 4	4	4 days / 90 - 100 hrs
<i>C. amapaensis</i>	150	1.5 mm	3 – 8	5	4 days / 90 - 100 hrs
<i>C. blochi blochi</i>	50	1.3 mm	2 – 4	7	4 days / 90 - 100 hrs
<i>C. ellisae</i>	65	1.0 mm	2 – 5	3	3-4 days / 85 - 100 hrs
<i>C. septentrionalis</i>	110	1.6 mm	2 – 4	4	3-4 days / 85 - 100 hrs
<i>C. stenocephalus</i>	60	1.3 mm	3 – 5	7	4 days / 90 - 100 hrs
<i>C. treitlii</i>	55	1.3 mm	2 – 5	5	3-4 days / 85 - 95 hrs

Table III.

Fry growth rates of seven *Corydoras* species, showing their total lengths per period of time.

	7 days	1 month	2 months	3 months	adult colour reached in
<i>Corydoras acutus</i>	4.0 mm	7.0 mm	14.0 mm	22.0 mm	8 – 10 weeks
<i>Corydoras amapaensis</i>	4.5 mm	8.0 mm	15.0 mm	22.0 mm	10 – 12 weeks
<i>Corydoras blochi blochi</i>	5.0 mm	9.0 mm	16.0 mm	23.0 mm	7 – 8 weeks
<i>Corydoras ellisae</i>	4.5 mm	8.5 mm	15.5 mm	23.0 mm	8 – 9 weeks
<i>Corydoras septentrionalis</i>	5.0 mm	9.0 mm	14.5 mm	21.5 mm	10 – 12 weeks
<i>Corydoras stenocephalus</i>	5.5 mm	9.5 mm	15.0 mm	20.5 mm	8 – 10 weeks
<i>Corydoras treitlii</i>	4.5 mm	8.5 mm	15.0 mm	22.0 mm	9 – 10 weeks

bred where there are known colour differences between the sexes, the males of some of these species can take a further eight or even as long as twelve weeks to mature and develop their adult colours. (Fuller, 1983b).

With the seven species so far bred from the 'acutus group' there were no discerning colour differences between the sexes that could be readily recognised. The first visual signs of maturing males are in the fin spines, the pectoral and ventral fins being the most prominent; becoming thicker and more elongated. In mature males of the seven species spawned the ventral fins are possibly the most reliable indicator of sex, as these become elongated and pointed compared to the rounded fan shaped fins of the females.

As with most animals, growth rates can vary tremendously. *Corydoras* fry are no exception, and caused some concern when one or two of the faster growing quicker developing males became dominant and were observed chasing and bullying smaller less mature specimens. The aggression became so intense preventing the smaller fry from feeding altogether.

To further assist and improve the survival rate of the smaller male fry, large clumps of Java Moss were placed in all the fry rearing tanks. This had the effect

of giving all the fry a secure refuge, and enabled the smaller males to avoid the bullying by the larger ones. It also had the effect of reducing the amount of squabbling between males of equal size, enabling the majority to reach adulthood (between sixty and seventy percent of the fry of all seven species reached adulthood).

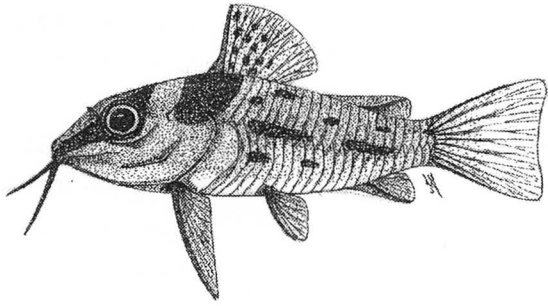
Long-term observations have shown that female *Corydoras* fry grow at a faster rate than males, as twenty percent. With the seven species bred from the 'acutus' group there is a difference of between ten and fifteen percent in standard length after ten months. Despite growth variation within each of the sexes, after ten to twelve week's males and females can be separated with relative ease.

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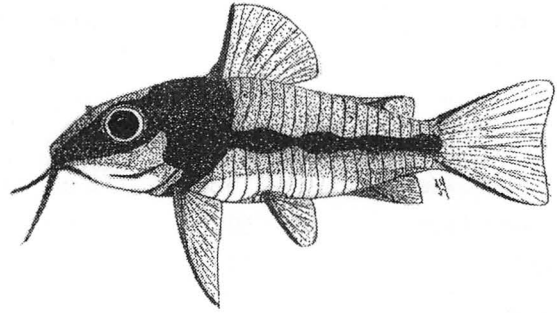
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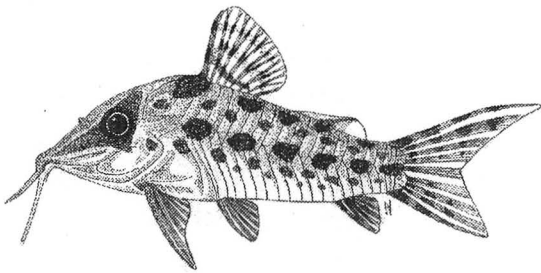
Figs. 15-21 28 DAYS



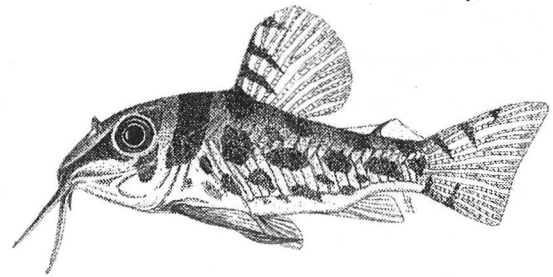
*C. acutus*



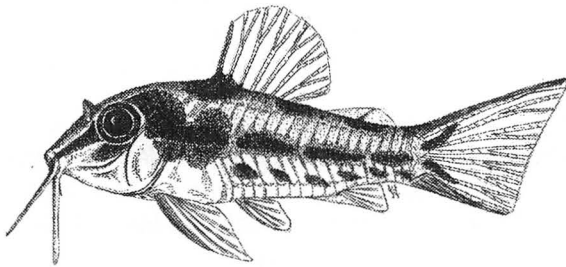
*C. amapaensis*



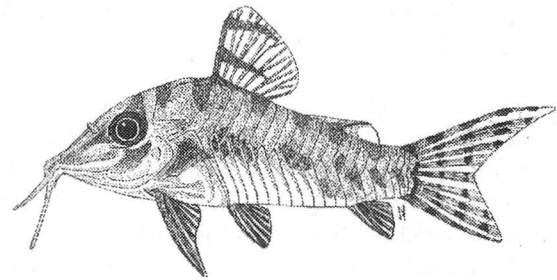
*C. blochi blochi*



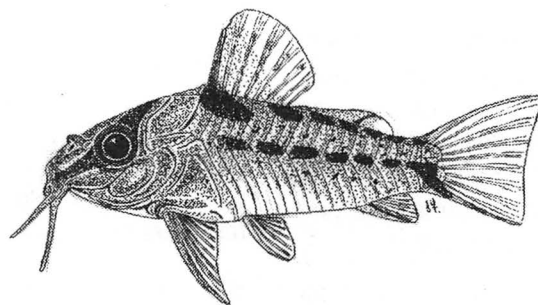
*C. ellisae*



*C. septentrionalis*



*C. stenocephalus*



*C. treitlii*

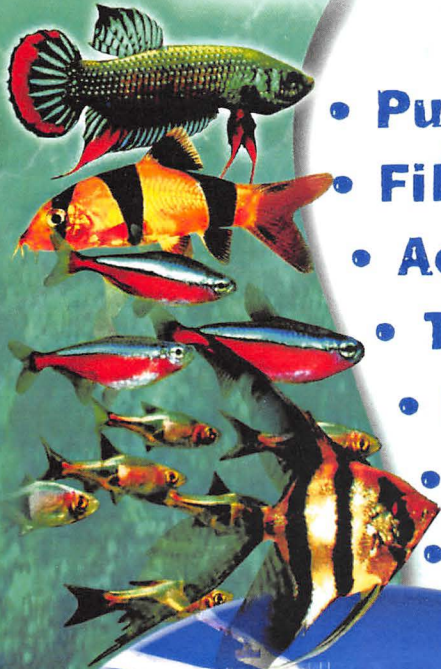


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# The Families of the Order Siluriformes

by  
R. Shane Linder

Carl Ferraris and Mario de Pinna, after an in-depth review of the relevant literature, have published a comprehensive list of all family-group and other suprageneric names proposed for the order Siluriformes. Their findings will undoubtedly cause a few groans from hobbyists, as we now have to learn some new names. Still other hobbyists may be disappointed that the authors chose not to retain such families as the Ageneiosidae. However, this new paper is important. While the rules that govern generic and specific names are very stringent, family level names do not come under such scrutiny. For many years it has been nearly impossible to know exactly how many catfish families legally (legal as defined by the International Code of Zoological Nomenclature) exist. Hopefully, this paper will provide some, at least temporary, stability to the number of catfish families.

A complete discussion of taxonomic terminology is beyond the scope of this paper, but a brief introduction to some of the terminology is certainly in order. Phylogeny (from the Greek phylon = tribe and genesis = origin) is the evolutionary history of a species or group of related species. These genealogies trace evolutionary relationships. Reconstructing phylogenetic history is part of the scope of systematics, the branch of biology concerned with the diversity of life. Systematics encompasses taxonomy, which is the identification and classification of species. A family, as used in this paper, is a taxonomic grouping below order and above genus. Family names for plants always end in *aceae* while those of animals, like catfishes, always end in *idae*.

The family level is an important classification for hobbyists. If the aquarist knows which family a fish belongs to they can immediately make inferences about the fish's diet, adult size, natural habitat, and other important information for captive maintenance. This is especially true in those cases where the aquarist is lucky enough to make when of those truly rare finds. At these times, it can be almost impossible to identify the fish to genus, let alone species and identification to family is the best we can hope for.

Below is a list of the 35 catfish families accepted by the authors after their review of the literature. I will make a few comments under each family to point out any radical changes or changes that affect popular aquarium catfishes. I will also point out common family names where they exist or have been confused and comment on the family's availability in the aquarium trade. I have

taken the liberty of suggesting a few common names for some of the newer families.

## Akysidae

Asian family rarely imported for the aquarium trade. Collectively known as the Asian banjo catfishes (Ferraris, 1991: 164) or stream catfishes (Jayaram, 1999: 266). The family Parakysidae, (Roberts, 1989), pustulous catfishes (Kottelat et al 1993: 105), is included in this family.

## Amblycipitidae

Very rarely imported family from Asia. Collectively known as the loach-catfishes (Burgess, 1989: 107).

## Amphiliidae

Very rarely imported family found in Africa. Collectively known as the African hillstream catfishes (Burgess: 109) or mountain catfishes (Skelton, 1993: 218).

## Anchariidae

Erected by Glaw and Vences, 1994 to accommodate *Ancharius* Steindachner, 1881. The family was proposed by de Pinna in an unpublished thesis. I have not seen the original description and thus can not add much. The family is found on Madagascar. I am not aware of any common name or importations.

## Andinichthyidae

Proposed by Gayet, 1988 to accommodate the fossil genus and species *Andinichthys bolivianensis* from South America. Obviously not an aquarium import.



**Ariidae**

A world-wide family known as the sea catfishes (Burgess, 1989: 158; Ferraris, 1991: 82) or shark catfishes (Baensch & Riehl, 1997: 434) even though some members are restricted to freshwater. Allen (1989:47) uses the term fork-tailed catfishes. Known in the hobby mainly for the *Arius* species imported as "shark catfish."

**Aspredinidae**

A South American family known as the banjo catfishes (Burgess: 295). A number of species are common imports.

**Astroblepidae**

South American hillstream catfishes (Burgess: 446) or Andes catfishes (Ferraris: 166). Restricted to South America and likely never imported.

**Auchenipteridae**

Collectively known as the driftwood catfishes (Burgess: 226). The family Ageneiosidae, the slopehead catfishes, appears to be included under this family, but is not specifically discussed. Imports range from the common (e.g. the Zamora or midnight catfish) to the rare (e.g. the jaguar catfish) to the very rare.

**Austroglanididae**

Collectively known as the rock catfishes (Skelton, 1993: 215), this family was erected by Mo, 1991 to accommodate the south African genus *Austroglanis*. All three species contained in the family are rare in nature and threatened or endangered by habitat destruction.

**Bagridae**

The family Bagridae, after Mo's 1991 revision, is now an exclusively Asian family with the exception of a single genus, *Bagrus*, that occurs in Africa. The family Olyridae, bannertail catfishes (Burgess: 153), is also now included in the Bagridae. Many members of the family are common to rare imports. Collectively known as the bagrid catfishes.

**Callichthyidae**

A South American family well known in the aquarium hobby especially for the members of the genus *Corydoras*. Collectively known as the armored catfishes Riehl & Baensch (1991: 453).

**Cetopsidae**

A South American family known as the whale catfishes (Burgess: 289). One or two species are rarely imported. Helogenidae, the marbled catfishes (Burgess: 287), is included in Cetopsidae.

**Chacidae**

A small Asian family of three species that are uncommonly imported. Collectively known as the frog-mouth catfishes (Burgess: 151). The common name angler catfishes has also been applied (Ferraris: 109) but should not be used as it appears that *Chaca* do not angle (Linder, 1998: 3).

**Clariidae**

Collectively known as the labyrinth catfishes (Burgess: 135), walking catfishes (Baensch & Riehl, 1997: 484), and air-breathing catfishes (Skelton: 227) this family is widely distributed throughout Africa and Asia. The U.S. Fish and Wildlife Service has declared them "injurious wildlife" and their import is banned (Ferraris: 113). Occasional specimens come in to the U.S. as by-catch or contaminants.

**Claroteidae**

Erected by Mo, 1991 to accommodate most of the African genera that were formerly of the Bagridae. This family is composed of 13 genera and over 90 species and are referred to simply as Claroteid catfishes (Skelton: 211). A few members of the genera *Auchenoglanis*, *Parauchenoglanis*, *Chrysichthys*, *Clarotes*, *Gephyroglanis*, *Lophiobagrus*, and *Phyllonemus* are uncommonly to rarely imported (Glaser, 2000).

**Cranoglanididae**

Known as Chinese catfishes (Burgess: 72) this Asian family contains but one species that has not been imported.

**Diplomystidae**

A South American family known as the Patagonian catfishes (Burgess: 23). This small family, with about four species, has not been imported. They are found in swift cool streams in Chile and Argentina.

**Doradidae**

A popular South American family known as the talking catfishes (Burgess: 199 Ferraris: 114) and thorny catfishes (Riehl & Baensch, 1991: 453). Importations range from common (the so-called raphaels) to rare.

**Erethistidae**

This Asian family consists of *Conta*, *Laguvia*, *Pseudolaguvia*, *Erethistoides*, *Hara*, and *Erethistes* which are genera removed from the family Sisoridae. A few genera are uncommon to



rare imports. No common name has been applied to this family. The family was erected by de Pinna in 1996. However, some subsequent authors (e.g. Jayaram, 1999) have not followed de Pinna's findings, while others have (e.g. Grant, 1999: 9). Hopefully, Ferraris and de Pinna's 1999 paper will stabilize the use of this family.

### Heteropneustidae

This small Asian family are referred to as airsac catfishes (Burgess, 148), fossil catfishes, and stinging catfishes (Ferraris, 121). Imports have become rare in recent years. Perhaps because of the restrictions placed on the closely related family Clariidae.

### Hypsidoridae

Erected for the fossil catfish genus *Hypsidoris* Lundberg and Case, 1970.

### Ictaluridae

A primarily North American family. Although maintained by a few specialist aquarists there is no organized commercial trade in place for the aquarium hobby. The only species commercially traded are juvenile channel catfishes that are brought into the hobby trade by aquaculture enterprises. Riehl and Baensch (1991: 453) use horned pouts as a common name and Burgess (1989: 26) uses bullhead catfishes. However, this latter name is normally applied only to members of the genus *Ameiurus*. Members of *Ictalurus* are commonly known as forktail catfishes, *Pylodictus* as the flathead catfish, and the largest genus *Noturus* as the madtoms. The common name should be standardized as North American catfishes as it is the only family native to the continent.

### Loricariidae

A large South American family that is very popular in the aquarium hobby. Common names include armoured sucker-mouthed catfishes and armoured catfishes (Ferraris, 126). Armour-plated catfishes (Riehl and Baensch 1991: 453), suckermouth catfishes (Burgess: 368), sucker-mouthed armoured catfishes (Innes, 1966: 285), and, of course, the plecos. Some scientific papers use armoured catfishes while Isbrücker and Nijssen (two scientists that have done a lot of taxonomic work on the family) consistently use the term mailed catfishes. With so many common names in use, it is impossible to suggest a

single universal common name.

### Melapteruridae

A small African family known as the electric catfishes (Burgess: 155, Riehl & Baensch, 1991: 453). At least one species in an uncommon import.

### Mochokidae

A large and diverse African family. Burgess (182) uses the term upside-down catfishes but only a very few members of a single genus swim in this manner. Also, at least one bagrid is an upside-down swimmer. Skelton (240) divides the family into squeakers (*Synodontis*) and suckermouth catlets (*Chologlanis*) which is certainly more descriptive. Because the family is so diverse as to defy a common descriptive name, the term mochokid catfishes should be used.

### Nematogenyidae

A small South American family consisting of a single genus. I am unaware of any importations of this family for the aquarium trade. The common name should be worm catfishes which follows from the family name and is descriptive of the family.

### Pangasiidae

An Asian family referred to as the shark catfishes by Burgess (100). This term has also been applied to the Ariidae. One species (*Pangasius hypophthalmus*, the iridescent shark) is common. Other species are showing up in the trade as the result of aquaculture programs.

### Pimelodidae

A large and popular South American family. Common names include antenna catfishes (Burgess: 243) and flat nosed (nosed?) catfishes (Riehl and Baensch, 1991: 453). Imports are common to rare depending on the species with *Pseudopimelodus*, *Microglanis*, and *Pimelodus* the most common. Hypophthalmidae, lookdown catfishes (Burgess: 293), are included in **Pimelodidae**.

### Plotosidae

A widely distributed family that includes marine species. Common names include tandan catfishes (Burgess: 171), eel-tailed catfishes (Ferraris: 157). The name eel-tailed catfishes is



the most commonly accepted (Allen, 1989: 55 Jayaram, 1999: 317, Kottelat et al 1993: 113). Only one species, *Plotosus lineatus*, is a common import for the marine hobby.

### Schilbidae

A medium sized family found in Africa and Asia. Sometimes spelled Schilbeidae (Burgess: 87 Jayaram: 249). Common names include glass catfishes (Burgess: 87, Riehl & Baensch 1991: 453) and butter catfishes (Skelton: 224). However, the term schilbid catfishes is more descriptive as very few members are transparent and the term glass catfishes is also often applied to the Siluridae. Importation of one *Eutropiellus* and one *Schilbe* species is common, but all others, especially those from Asia, are rare.

### Scoloplacidae

A small family found in South America and referred to as spiny dwarf catfishes (Burgess: 450). Only very rarely imported and usually only as by-catch.

### Siluridae

A large family found from Europe (two species) through Asia. Commonly known as sheat catfishes (Burgess: 74), glass catfishes (Ferraris: 161), old world catfishes (Riehl & Baensch 1991: 453), and sheath (Baensch & Riehl, 1997: 576). Sheat catfishes is the term preferred in most scientific works and should be used to refer to the family. Importation of Southeast Asian species ranges from common (various *Kryptopterus*) to uncommon (e.g. *Ompok*) to rare (e.g. *Belodontichtys*) with all other species rarely, if ever, imported.

### Sisoridae

A large Asian family commonly known as Asian hillstream catfishes (Burgess: 119) and sucking catfishes (Kottelat et al: 106). Asian hill stream catfishes in the most widely used name. Imports are generally rare. This appears to be mainly due to the high oxygen requirements and cooler temperatures demanded by most species. Neither of these requirements is conducive to commercial shipping.

### Trichomycteridae

A large South American family known as parasitic catfishes (Burgess: 305). This name is probably undeserved as most species are not parasitic. However, it is likely to remain in use.

Imports are rare and infrequent. These fishes undeserved reputation scares off many would be importers.

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# Families of the order Siluriformes after Ferraris and de Pinna, 1999

## Fossil Families

<i>Family</i>	<i>Range</i>	<i>Common Name</i>
Andinichthyidae	South America	
Hypsidoridae		

## Living Families

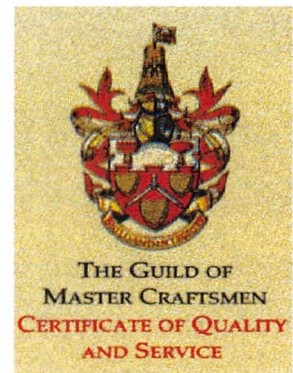
<i>Family</i>	<i>Range</i>	<i>Common Name</i>
Akysidae	Asia	Asian banjo catfishes
Parakysidae		pustulous catfishes
Amblycipitidae	Asia	loach catfishes
Amphiliidae	Africa	African hillstream catfishes
Anchariidae	Madagascar	Madagascan catfishes
Ariidae	Worldwide	sea catfishes
Aspredinidae	South America	banjo catfishes
Astroblepidae	South America	South American hillstream catfishes
Auchenipteridae	South America	driftwood catfishes
Ageneiosidae		slopehead catfishes
Austroglanididae	Africa	rock catfishes
Bagridae	Asia and Africa	bagrid catfishes
Olyridae	Asia	bannertail catfishes
Callichthyidae	South America	armored catfishes
Cetopsidae	South America	whale catfishes
Helogenidae		marbled catfishes
Chacidae	Asia	frog-mouthed catfishes
Clariidae	Africa and Asia	labyrinth catfishes
Claroteidae	Africa	claroteid catfishes
Cranoglanididae	Asia	Chinese catfishes
Diplomystidae	South America	Patagonian catfishes
Doradidae	South America	talking catfishes
Erethistidae	Asia	moth catfishes
Heteropneustidae	Asia	airsac catfishes
Ictaluridae	North America	North American catfishes
Loricariidae	South America	armored suckermouth catfishes
Melapteridae	Africa	electric catfishes
Mochokidae	Africa	Mochokid catfishes
Nematogenyidae	South America	worm catfishes
Pangasiidae	Asia	shark catfishes
Pimelodidae	South America	antenna catfishes
Plotosidae	W. Pacific & Indian Oceans	eel-tailed catfishes
Schilbidae	Africa & Asia	schilbid catfishes
Scoloplacidae	South America	spiny dwarf catfishes
Siluridae	Europe & Asia	sheat catfishes
Sisoridae	Asia	Asian hillstream catfishes
Trichomycteridae	South America	parasitic catfishes





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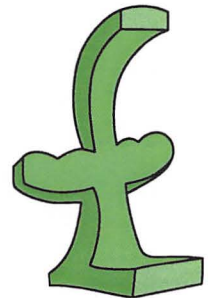
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