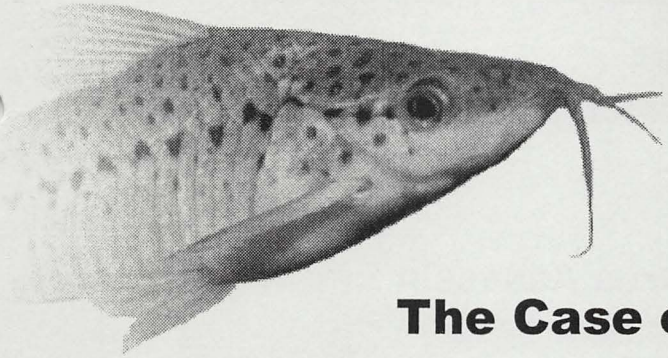
CAT CHAT

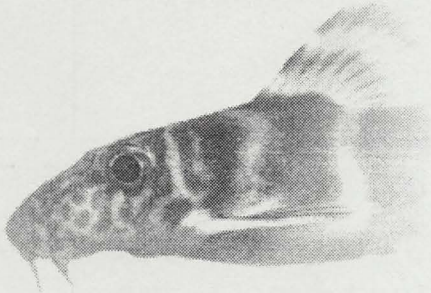
The Journal of the Catfish Study Group (UK)

In this issue



The Case of the Ancistrus Assassin

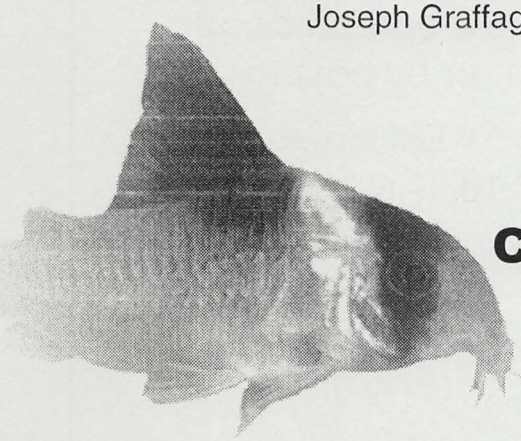
Joe Graffagnino



Open Show Results 2003

Hoplosternum catfish: littorale & thoracatum

Joseph Graffagnino from the Brooklyn Aquarium Society



Crossbreeding in *Hypancistrus* (L136 X L66)

By Yann Fulliquet

Volume 4 Issue Number 4
December 2003

CONTENTS

APOLOGY

I would like to apologise for the confusion caused with some of the dates published in the previous issue.

After checking the date for the Convention in January 2004, I erroneously used the same 2004 calendar for the Forthcoming Events dates in Oct, Nov & Dec 2003.

Judging by the large attendance at the Autumn Auction, I assume that not too many people were inconvenienced, however, I do apologise to those people who were.

Bill Hurst
Editor

Articles and pictures can be sent by e-mail direct to the editor
<bill@catfish.co.uk>
or by post to

Bill Hurst
18 Three Pools
Crossens
SOUTHPORT
PR9 8RA
(England)

ACKNOWLEDGEMENTS

Front Cover: Original Design by Kathy Jinkins.

HONORARY COMMITTEE FOR THE CATFISH STUDY GROUP (UK) 2003

PRESIDENT
Trevor (JT) Morris

VICE PRESIDENT
Dr Peter Burgess
PJBurgess@compuserve.com

CHAIRMAN
Ian Fuller
ian@corycats.com

VICE CHAIRMAN
Danny Blundell
DANNY.BLUNDELL@care4free.net

SECRETARY
Temporarily Ian Fuller

TREASURER
Temporarily: Danny Blundell
DANNY.BLUNDELL@care4free.net

MEMBERSHIP SECRETARY
Julian Dignal
jools@planetcatfish.com

SHOW SECRETARY
Brian Walsh
g.b.w@brianwalsh1.freeserve.co.uk

ASSISTANT SHOW SECRETARY
Ann Blundell

AUCTION ORGANISERS
Roy & Dave Barton

FUNCTIONS MANAGER
Trevor Morris

SOCIAL SECRETARY
Terry Ward

WEB SITE MANAGERS
Allan James allan@scotcat.com

COMMITTEE MEMBERS
Peter Liptrot
bolnathist@gn.apc.org

SOUTHERN REP
Steve Pritchard
S.Pritchard@btinternet.com

CATERING DEPARTMENT
Mr & Mrs Morris and Mr & Mrs Ward

CAT CHAT EDITOR
Bill Hurst
bhurst@catfish.co.uk

DISTRIBUTION
Ann & Danny Blundell

SCIENTIFIC ADVISER
Isaäc Isbrücker

CAT CHAT

The Committee of the CSG (UK) would like to thank the following advertisers for their support in the production of this journal

BARLOW'S AQUATIC TRADING
ACCRINGTON

BRITAIN'S AQUATIC SUPERSTORE LTD
BOLTON

PIER AQUATICS
WIGAN

GBW JOINERY
DARWEN

MERMAID FISH IMPORTS
BROMSGROVE

From the Chair

Once again we have come to the end of another yet another year and as far as the Catfish Study Group is concerned, a very good one. Our four major events during the year were all successes. The only down side has been the number of people failing to renew their memberships. The disappointing thing is that we never find out the reasons why. Perhaps a second reminder would be in order because we do get people rejoining after they have been reminded.

For those of you that are not aware it we now have our own independent web page at

http://Catfishstudygroup.org

Webmaster is Allan James of **http://Scotcat.com** fame, who is working hard to keep everything up to date and I am sure he will welcome any ideas or suggestions for improvement. Not only do we have the web site but also thanks to Julian Dignall and **http://Planetcatfish.com** we have our very own section on the Planet Catfish forums. All you need do is sign up to the forum then Click on 'user groups' at the top of the forum page, then select the CSG. You can then click on the "join group" button and once you have been verified as a valid member you can take part in discussions and have a direct input into the CSG. Things are slowly picking up as more members become aware of the site. Now you know that the facility is there, you can have a good natter about your fish.

Now that's all the groups web promotions done I'll get on with the business of what the Group's been up to in the last three months.

September: The annual Open Show and Auction. The open show itself was a great success, with entries well up on last year. A total of 150 fish were entered, from a one inch Aspidoras to a twenty-eight inch Auchenoglanis. The whole show was well worth seeing. For a full rundown see the Show Report in this journal. This year I decided to show some of my fish to

The Group's stand at BAF 2003 with Trevor Morris.

offer a challenge to any member to come and stop me taking all the prizes. Unfortunately, it never quite worked out because one of our judges had to withdraw at the last minute and I stepped into the breech. Maybe next year you'll get a chance! The accompanying auction was also very well attended and although I did not see very much of what went through in the many lots, I am reliably informed that the quality of the items was exceptional.

October: Robin Warne was the speaker and gave a presentation on 'L' Numbers, which was very well received by those who attended.

November: The Autumn Auction and again this event proved to be successful for all concerned although slow bidding did seem to keep the prices a bit on the low side. Some top quality fish were had for very reasonable prices and I would go as far as to say that some were a steal at the prices they went for. Perhaps we were all saving our money for Christmas.

It only remains for me to thank all the committee for their continuous support throughout the year and to give a special thankyou to the canteen staff for their constant hard work, I don't know what we would do without the constant supply of tea, coffee and the what must surely be by now our world famous Pie & Peas.

And finally I would like to take this opportunity to wish you all a very Happy Christmas and a Prosperous Catfish New Year.

Ian Fuller

Hoplosternum catfish: littorale & thoracatum

Joseph Graffagnino from the Brooklyn Aquarium Society

Hoplosternum catfish are members of the family Callichthyidae, which are armored catfish. This family contains the sub-family groups of Aspidoras, Brochis, Callichthys, Corydoras, Dianema and Hoplosternum. The armor on these catfish is the overlapping bony plating along their flanks and back portion of their body. Hoplosternum have an additional armored breast plate almost meeting in the middle of the chest area and is called the coracoids. This armor is believed to help them resist infections and parasites. Hoplosternum catfish inhabit large rivers, swamps and streams in Brazil, Surinam and Venezuela, South America.

There were three (3) species of Hoplosternum:

Hoplosternum pectorale or "pigmy hoplo" - which attains a length of 3 inches, is difficult to breed.

Hoplosternum thoracatum (Now *Megalechis thoracata*) or "brown hoplo"- which attains a length of 5 inches, is considered easiest to breed.

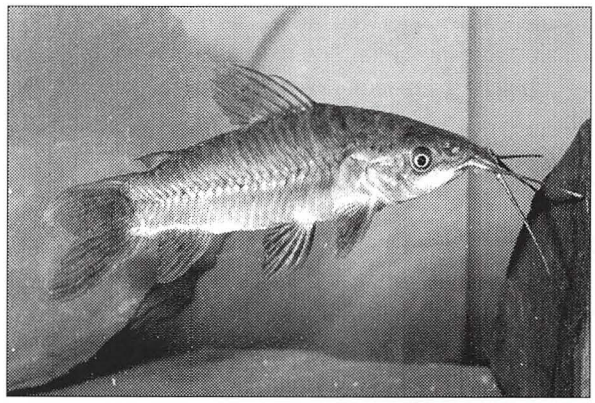
Hoplosternum littorale or "giant or grey hoplo"- which attains a length of 8 inches, is considered moderately difficult to breed.

All Hoplosternum catfish are "bubblenest" builders. They prefer a temperature range of between 75 – 80 degrees Fahrenheit (24 – 27 degrees Celcius).

They feed on snails, shrimp, worms and plant matter. In the aquarium they will eat flake food, pellet food, frozen food (mysis shrimp, bloodworms, and daphnia) or live food (black worms). I DO NOT feed live or frozen brine shrimp or tubifex worms, because I have not had positive results with these food types.

Hoplosternum do not reach sexual maturity until 1-1½ years for thoracatum, 3 years for littorale and unknown for pectorale, *in my opinion*. To induce spawning in Hoplosternum maintain the temperature at 80 – 82 degrees F., feed live black worms (thoroughly clean, with no odor to them), and aquarium water level of 60 –75% of tank capacity. They require large amounts of plant matter such as Java moss or water sprite, as they will use this to support a bubble nest. Add a plastic top from a coffee can for the thoracatum species or a gallon pail plastic top for the littorale. The plastic tops are a firm support to attach eggs to and a firm object to anchor the nest to. The ph is between 6.5 and 7.0. When spawning occurs they will lay between 20 to 500 eggs, depending on size of fish and maturity. After spawning it is wise to remove the female, because she may eat the eggs and the male usually chases her off. The male may wound or even kill her. The male guards the nest until the eggs hatch, at this point remove the male and let the fry grow in the tank they were spawned in.

Hoplosternum littorale



The adventure started when a friend asked me to "fish sit" and possible try to spawn a large pair of Hoplo catfish that she has had for several years. She has raised these catfish in a 55 gallon (48"L X 12"W X 24"H) tank with other catfish such as albino plecostomas (Hypostomus), large driftwood cats (Parauchenipterus galeatus), corydoras cats and several South American cichlids. At no time did any of these fish spawn or show signs of breeding. I looked upon this as a fun project and a challenge to successfully spawn this spectacular, but little known catfish. I had no idea what I was in for!

The Hoplosternum littorale initially were placed in a 20 gallon long (30"L X 12"W X 12 3/4"H) aquarium. There was driftwood, live Amazon sword plants, duckweed and regular gravel. Temperature of 79 - 80 F, ph of 6.6 - 6.8. The fish are both approximately 7 inches long. The male has a sloped forehead and broad shoulders, he also has pectoral fins that curve up at a 45-degree angle. He uses these pectoral fins to slash an opponent or as a defensive weapon when guarding his nest. A Dynaflow 150 overflow filter and a large plastic box filter, filled with filter floss, charcoal and ammonia chips provided filtration. I placed a plastic egg carton to float on the water.

Within eight (8) days the male started a bubble nest under the egg carton, however he flipped the carton over so that the top, flat side was under the water and the egg hole side was out of the water. He also uprooted the Amazon sword plant and placed it alongside the egg carton. This is a smart fish! The male would build the nest, with minor help from the female. The male would make a fast move to the surface and capture an air pocket. He then dives under the egg carton, remains upside down and expels the air through his gills while rapidly moving his pelvic fins thus frothing the air bubbles under the nest. He uses his pectoral fins to place the air bubbles in the correct spots. He then breaks large bubbles into smaller bubbles. When satisfied with this he will return to the surface for another gulp of air. He wasn't pleased until 80% of the egg carton was covered in a very fine bubble nest. The next day he decided to rearrange the furniture so he moved the large Amazon sword plant to the opposite side of the egg carton. When completed, the bubblenest measured 3/8 of an inch high, 11 ½ inches wide and 21 inches long. The female showed no outward signs of holding eggs. The following day the entire bubble nest is gone!

Over a period of many months the pair build and demolish bubble nests. To induce spawning I have added Epson salt and kosher salt to the tank for minerals and conductivity. I performed bi-monthly water changes with cold water to lower temperature (5% of water volume), raise the temperature to 83 degrees Fahrenheit and drop it to 77 degrees Fahrenheit, the ph fluctuated from 5.5 to 6.8. I try to perform water changes with a storm entering the area (outside temperature drop of 10 - 20 degrees Fahrenheit).

The male Hoplosternum littorale is very aggressive, when I placed my hand into the tank, he rushed to attack with his head and pectoral fins coming out of the water with the assault. The male does the nest building with some help from the female. She does poke him and rubs over him to keep him active (sound familiar?). I add four small Chocolate cichlids [Hyselecara temporalis] to their tank to act as "dither" fish. The male "head butt" a Chocolate cichlid to keep him away from the nest area.

Allow me to describe the pair of catfish at this time. The female has a light grey topside body, with a lighter grey colour towards her belly and then to an off white underbelly. The abdomen appears to be slightly swollen. The females' pelvic fins have a pink tint to them. The male is a dark gray and also has a grayish white underbelly that blends in with his coracoids (breastplates). Male has dark gray pelvic fin, which he prefers resting on along with the anal fin, for balance, instead of laying on his stomach. The male and female have a 1/8 – ¼ inch thin, flexible genitalia protruding from behind the anal cavity.

I have been feeding them heavily with frozen mysis shrimp, live earthworms (cut up), live black worms and frozen blood worms, along with pellet food and flake food the day before. The male is keeping the Chocolate cichlids away from the nest and has attacked me again, even though I was on the outside of the tank and never lifted the cover.

The action was non-stop but produced no results so I decided it was time to make radical changes. I moved the pair to a 30 gallon tank (36"L X 12"W X 20"H), no "dither" fish, no tank divider, no gravel, no ornaments or wood pieces, no heater (summer, water temp. was 78 degrees F.). I added Java moss, floating riccia and water hyacinths. They built a nest four (4) days later and for the first time the nest survived into the third day. Another interesting development was that the entire tank was coated in this "slime" (could this be milt?) This "slime" was everywhere; in the plants, on the glass, on the filter. To remove the "slime" a heavy water change and 3 tablespoons of Kosher salt were required. The plants were completely coated and never regained their former colour and firmness and had to be replaced. The only physical appearance I noticed on the pair was that the male had brighter, yellow brown, pectoral fins. The female had no differences. The bubble nest, measured 14 " L X 12" W X 5/8" H. – STILL NO EGGS!

In January 2002 Dr. Sallie Boggs was the speaker at our club (Brooklyn Aquarium Society) meeting. She was kind enough to visit my home while we were visiting other catfish affectionados in the general area. I mentioned that I was having trouble spawning these catfish. Dr. Boggs suggested that I raise the water volume in the tank from the existing 5 - 8 inches to 18-20 inches. Place a firm, hard plastic top so the fish can secure their eggs to it instead of the non-rigid, light plastic pieces I was using.

Twelve days later Dr. Boggs was correct! Found approximately 50 eggs in the Java moss. [Exactly 1 year and 1 day since the first nest was built]. They were very sticky and could not be easily removed from the Java moss. I removed the eggs and placed them in an artificial hatchery using a drop of *Acriflavine* (anti-fungus medication) by Kordon. The eggs resembled opaque killie eggs. [It is OK to have the eggs in the air they won't dissolve or fungus by having air contact]. The day was sunny and clear, however it did rain the next day!

Interesting note (1) – the nest was very small under the bottom of a plastic lid. Few eggs were in the nest but the majority was on the floor or in the Java moss.

Interesting note (2) – a friend had six Hoplosternum thoracatum and a pair spawned the same day as my Hoplosternum littorale spawned.

Important note – neither the male nor female H. littorale fought for or guarded the nest. *This is exactly the opposite of how they should normally behave.* The new parents didn't eat pellet food, but did eat the live black worms and frozen bloodworms. In the breeding aquarium the tank light was off; the temperature was 78 degrees F. with a ph of 6.6 – 6.8.

Two days later the eggs start to hatch! The water temperature was 78 degrees F., with a ph of 6.6 – 6.8. The eggs are 1/16 of an inch. The fry are 3/16 of an inch. The fry were removed from the artificial hatchery and placed in a floating worm holder. A few eggs in the parent tank hatched but the fry did not survive past the first day, many eggs had fungused. The fry in the worm holder are eating a mixture of Cyclops and Wet Thumb Aquatics "Select Fry Starter" meal.

The same day the fry were hatching the parents built a huge nest with Java moss, water sprite and the plastic top. The nest is 13"L X 12" W X 1 ½" H. The parents are showing a lot of affection for each other by resting side by side, frequent tail and body caresses. Both the male and to a lesser degree the female, are defending the nest, BUT THERE ARE NO EGGS IN THE NEST! The nest lasted approximately 1½ days.

The fry at 11 days old have doubled in size to 6/16 of an inch and they now have five (5) vertical bars on their body.

Twelve days after the fertile nest was built another small nest was built, a few eggs were found a day or so later, but they were not fertile.

Interesting note – the small nests are almost exclusively made up of water sprite, with Java moss underneath the nest and going to the bottom of the tank. The huge nest was constructed out of every available scrape of plant in the tank and the plastic cover. They still release some "slime" in the tank, when they build a nest, but in varying amounts.

Twenty five (25) days old the Hoplo fry are now ½ inch long!

Two months to the day later another small nest of Java moss and water sprite. They did not use the plastic lid. They built the nest directly under the filter spout of the Dynaflow 150, which the outflow has been reduced to a trickle. They ate earthworms (chopped up), live black worms, and shrimp pellets for 2 days prior to nest creation. It rained and became very cold the evening before due to a cold front coming into the area. The water temperature is 78 – 80 degrees F., with a ph of 5.8 – 6.0. The eggs look and feel like opaque pearls. When the eggs are first laid they are slightly opaque but clear. The fertile eggs turn dark, but the shell stays hard. The unfertile eggs turn white and the shells become soft. As the eggs ripen the fry's eyes can be seen as two black dots. These were placed in a artificial hatchery of plastic 2 liter soda bottles with the bottoms cut away and with air stones to create water movement to maintain the eggs in a slowly revolving manner, with ¼ drop of *Acriflavine* (anti-fungus medication). The next day I found ten additional fertile eggs and many unfertile eggs.

Three days later eggs found under a small, imperfect bubble nest, under the plastic lid with a little water sprite and Java moss.

Important note – it was cold the day before and rained for two days prior to egg laying. A cold front moved into the area – is this a signal for a *fertile* nest?

Within three days the eggs hatched. I placed the eggs in a plastic shoebox, with a sponge filter, air stone. I tied a woman's stocking piece that was filled with charcoal and ammonia chips, tied to airline tubing and shoved into the opening of the sponge filter. The shoebox was floated inside a 10-gallon tank that had a heater in the tank and a plastic cover over the top of the 10 gallon tank. Fry were fed a combination of crushed algae flakes, Sanders fry powder and the Wet Thumb Aquatics fry food. I started losing a couple of fry so I switched to microworm culture and frozen daphnia to feed the fry. There are 40 hoplo fry.

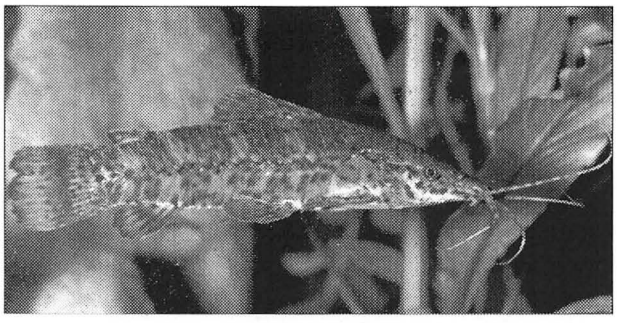
I change the water in the shoebox twice daily (morning and evening) using approximately 50 % change with dechlorinated tap water and existing water from parent tank.

Important note – lower ph makes for happier Hoplo fry and don't forget the basics to constantly check the ph and temperature, along with water and food quality.

Hoplosternum thoracatum

A friend gave me five Hoplosternum thoracatum (2 males and 3 females). She said they needed a good home and a female was holding eggs. She was overrun with Hoplo thoracatum fry. It seems that once you got them to spawn, you can't get them to stop. She said that they should lay eggs immediately. I said that because they are new to my environment, they

need to get familiar with the tank, the water conditions, etc. She said no, just toss in a plastic cover off a coffee can and you should have eggs the next day. I learned a long time ago that women are never wrong and sure enough the H. thoracatum spawned the next day. They built a small bubble nest, using water sprite and Java moss, under the coffee lid.

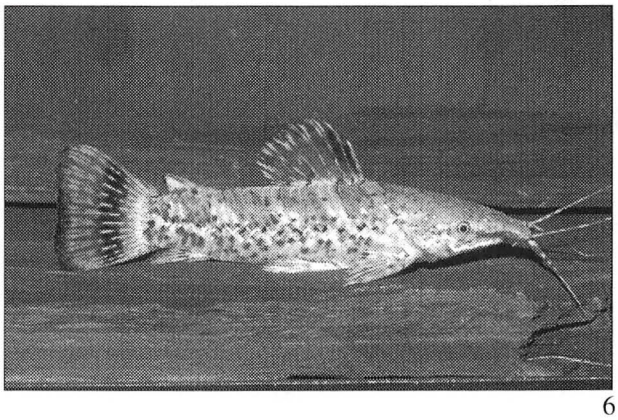


***Megalechis-thoracata*-P05**

Interesting note (1) – there were no practice nests, the nest was small with only a few bubbles around the lid. This group has spawned previously in another person's aquarium. The male did attack me on a few occasions. The male came out of the water trying to slash me with his orange pectoral fin when I had my hand in the tank. He was definitely defending a nest with eggs in it.

Interesting note (2) – all the eggs were attached to the plastic lid. The eggs appeared to have been glued on. I needed a scraper to peel the eggs off and took parts of the plastic top label with the eggs. I found no eggs on the gravel or in any plants, they may have been eaten by the H. thoracatum's because there were no other type fish in that 35 gallon breeder aquarium [34 "L X 18" W X 10 1/2" H].

Allow me to take a moment to describe the Hoplosternum thoracatum and the differences between them and their first cousins the Hoplosternum littorale. The H. thoracatum reach a maximum length of 5 inches, they are brown in colour with black dots and black bars on the tail. The H. thoracatum spawn in the "*Cory*" style with the female's nose on the males' vent in the classic "T" position. The female carries the eggs in her ventral pouch and deposits them in the bubble nest created by the male. The males' pectoral fins turn orange when they are sexually mature. They have a white, with black dots or markings on their stomach area. I have enclosed some photos of them along side each other to provide a graphic difference between the two types of Hoplos. The Brown Hoplos lay orange eggs where the gray Hoplos lay clear opaque eggs.



12 hours after the thoracatum spawned the Hoplo littorale laid a couple of hundred eggs.

Interesting note – the littorale eggs were laid 12 hours after the thoracatum eggs, yet they hatched sooner (water temperature and ph were the same in both tanks). The littorale took 3 days to hatch where the thoracatum took 5 days to hatch. I moved the thoracatum fry into a five-gallon tank by themselves.

The good news is the Hoplo littorale fry that I kept with the parents are three times the size of the ones I siphoned out and placed in a worm holder.

The bad news is the parents do eat the fry, maybe not the first week, but they will. I caught 18 remaining littorale fry in the parent's tank and moved them back to a small tank by themselves.

In 5 ½ months the littorale babies grew to 1 ¼ - 3 inches in length. At 6 ½ months the 5 smallest littorale fry ranged from 1 ¾ - 2 ¼ inches in length (all were 1 ¼ inches long). They grew between 1/2 – 1 inch, in one month with the absence of sibling rivalry for space and food.

Interesting note – the catfish fry of both species grow at approximately the same rate. The Hoplosternum thoracatum have less size differences within their group. The Hoplosternum littorale group has major size differences within their group. The largest of the littorale was considerably bigger than the largest of the fry in the thoracatum group, by better than ½ inch in length. The H. littorale fry was taller and broader than the H. thoracatum. The smallest of the H. littorale fry was shorter than the smallest of the H. thoracatum by ¼ inch.

Summary and Theory:

Based on my observations (observations of a hobbyist and not a scientist) it is my theory that Hoplosternum littorale are unique in the catfish world by creating false or decoy nests.

Hoplosternum littorale build large, elaborate nests for predators to attack, while the real nest is small and doesn't draw much attention.

Hoplosternum littorale defend large nests with no eggs while ignoring the small nests that have eggs.

B·A·S

One of the Worlds Largest Aquatic & Pet Centres

Always A Huge Selection Of Fish From All Over The World !

We are keen to supply the fish that people want. We try to stock as much variety as possible and we constantly investigate new suppliers and sources for rare and unusual fish.

And just to make your visit worthwhile, you will also find
* Vast Dry Goods * Aquarium Furniture
* our own OATA approved Red Sea Aquariums
* Pond and Water Garden Products * Coldwater Fish
* Marine Fish * Aquarium Plants * House Plants
* Large Pet Department * Gift Shop * In Store Café
* Vending Machines * Large Free Car Park

And

BAS Angling

BRITAINS AQUATIC SUPERSTORE LTD
225 FOLDS ROAD
BOLTON
BL1 2TW
Tel: (01204) 534343 * Fax: (01204) 364174
Email: fish@bas.co.uk
Www.bas.co.uk

BARLOWS AQUATIC TRADING

NOW SELLING RUTO FROZEN FISH FOOD AT RIDICULOUSLY CHEAP PRICES!

25 PACKS - £35.00
50 PACKS - £65.00

THIS IS THE MAIL ORDER PRICE!
Next Day Delivery & VAT Inclusive

ANY MIXED VARIETIES FROM:

Daphnia; Cyclops; Brineshrimp; Bloodworm; Chopped Mussel; Discuss food; Cichlid Mix; Tubifex; Malawi Mix; Quintet Mix; Vegi Diet; Marine Mix & Lancefish

Have your Credit Card ready and Ring
01254 388815

They tend to eat their young after a week, even though they are well fed.

* The larger the area for the fry the faster they grow, at triple the growth rate of fish in small areas such as worm holders or 5 gallon tanks, even when given less food to eat.
* It seems that very low ph (-6.0) has a detrimental effect on egg fertility.
* Of the eight (8) large bubble nests none had any eggs.

Of the ten (10) small nests only three (3) had no eggs while the other seven (7) had varying amounts of eggs from a few to a couple of hundred. On the small nests that had few eggs, most were not fertile, while in the nests that had many eggs the majority were fertile.

The small nests that had a smaller amount of eggs and were mostly infertile, were spawned after a short rest period of only a couple days while fertile nests had a rest period of greater than one month.

In the 18 months I have had these fish most breeding activity happened during the months of January through mid April. Only one spawn attempt in May, July and October. Spawning picked up again in January on the same dates of the previous year for the first and second nests.

H. littorale nests start at the top of the plastic lid and work the nest downward.

To get theses fish to spawn originally is difficult, but then the spawns are based on the barometric pressure of storms and cold fronts changes.

Differences with the Hoplosternum thoracatum are:

H. thoracatum have orange eggs while H. littorale have opaque eggs.

H. thoracatum do not build "dummy" nests".

H. thoracatum defend the "real" bubble nests.

H. thoracatum eggs hatch in 5 days to the H. littorale's 3 days.

H. littorale grow slightly faster than H. thoracatum, which is logical because they become the larger species.

As both species continue to breed the spawns become considerably larger.

I hope you have learned something from this article on the breeding of these magnificent catfish. These catfish are unique in their skills and breeding techniques. It is hoped that this article will promote further research on these intelligent fish. I hope you will enjoy these fish, as they will make an interesting addition to any aquarium.

As an append the pair of Hoplosternum littorale were returned to their original owner, in the original 55-gallon tank, with the same tank mates they had before, in June of 2002. In the past 16 months that have never attempted to spawn. The fish are adjusted, healthy and are in good condition.

References:

The World of Catfishes by Midor Kobayagawa, edited by Dr. Warren E. Burgess by T.F.H., 1991

Back To Nature Guide To Catfish by David Sands, by Fohrman Aquaristik AB, Sweden, 1997

A Fishkeepers Guide To South American Catfishes by David Sands, Tetra Press, 1988

EDITORS NOTE:

There have been some name changes to the old 'Hoplosternum' group but most aquarists and dealers still use H. thoracatum. I do not think that the name distracts the reader from the author's observations, in this article, about two fish so visibly similar.

Shane Linder
Convention Speaker

Shane Linder was raised on his family's ranch in Northern California near Yosemite National Park where, as a child, he spent his days catching fishes, frogs, and turtles. For some reason he never grew out of this habit. Shane has lived in South America for the last three years and has collected fishes throughout Venezuela, Colombia, Ecuador, Peru, and Brazil. He writes for various aquarium publications in the U.S. and Europe and is a participant in the All Catfish Species Project. Shane has been contributing to Jools Dignall's website Planetcatfish since the early days of the site and takes great pride in participation. He is currently working on several projects including a book about the two years he spent collecting fishes in Venezuela.

CATFISH STUDY GROUP (UK)

Sunday 15 February 2004

Spring Auction

Starts at 1300 hrs
at
St Elizabeth Parish Hall
Bolton Road
Aspull
Wigan

Booking in from 1030 hrs on the day
Pre-book by telephone on 01942 248130

Canteen

Tea, coffee, cold drinks, hot food sandwiches, cakes.

Rules:

Items for the fishkeeping hobby only.

All Electrical Goods must have a Name and Telephone number on them, together with the condition of the item i.e. Spares, Working Order, Faulty etc..

All plants and fish to be auctioned should be in clear plastic bags, or jars large enough for them. Large fish may be offered in plastic containers/buckets. Fish should be identified (Common or Latin names). 'Painted' fish will not be auctioned.

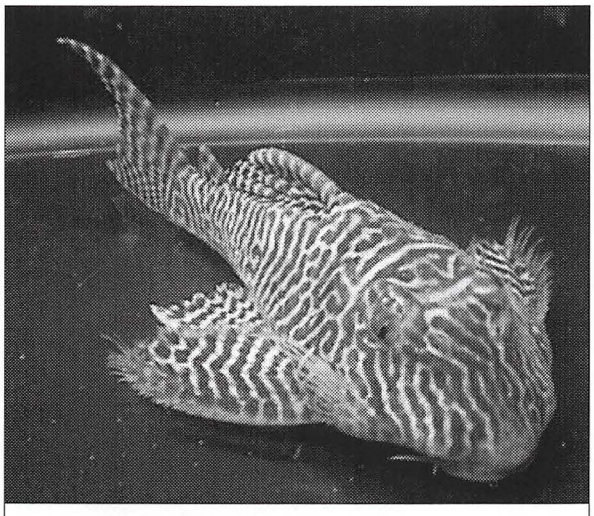
There is a 15% commission to the Catfish Study Group on all sales. Payments to vendors will be made at the interval or at the end of the Auction.

The CSG is in no position to accept responsibility for the condition of any item sold at the auction or to exchange any item purchased. If in doubt, bid for an item 'as seen'. The vendor's name will be available to the purchaser, in the event of a problem, on the day only.

A case of crossbreeding in *Hypancistrus* (L136 X L66)

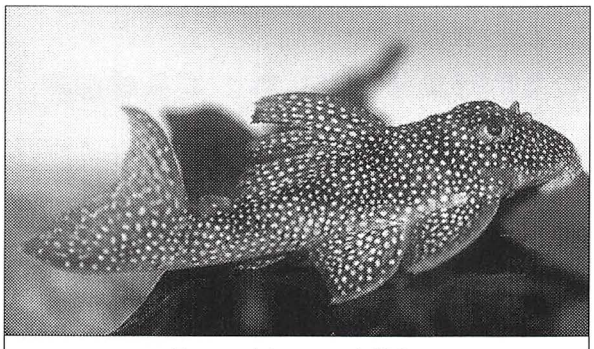
By Yann Fulliquet

This is a little summary of what was observed during an accidental case of crossbreeding that has involved two undescribed species of the genus *Hypancistrus*. I was keeping 5 *Hypancistrus sp* L66 along with 4 *Hypancistrus sp* L136. Both male and females were present for both species. Several caves were placed in the tank, in hope to successfully breed both.

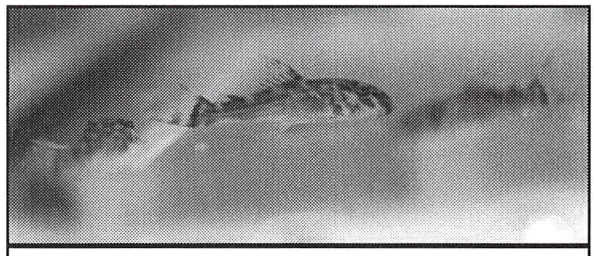


Hypancistrus sp. L066

I actually never thought of any possible crossbreeding between the two, because their colour patterns are very much different. With L66, the overall colouration is white with a lot of curved black lines. With L136, the overall colouration is black with small white to yellowish spot all over the body. In both species and sex the belly is white. Their adult size is also different. L66 can grow up to 15 cm; they usually become mature at around 10cm. With 136, they grow up to 10 cm, and usually become mature at around 6-7 cm.



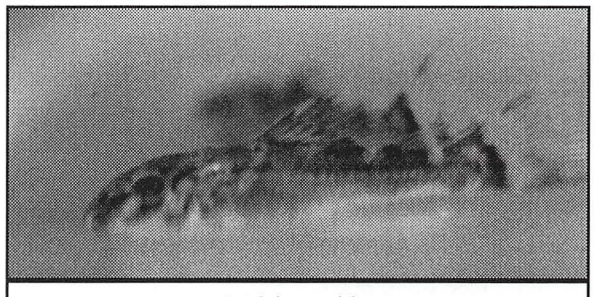
Hypancistrus sp. L136a



L136 X L66

Everything went on pretty well. I noticed one day that one L66 male was in a cave. With this species, when a male is guarding a cave, it is usually a sign of his willingness to spawn, the rest of the time they will not use them. I did several water changes to simulate a rainy season and also to stimulate the pairs.

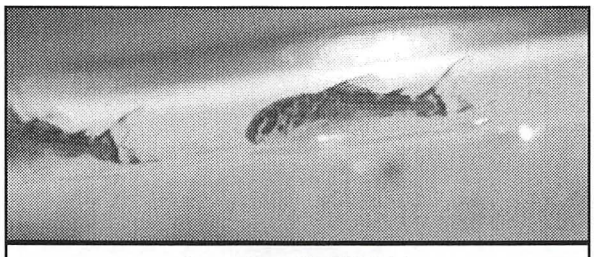
After a few days of that treatment, I found a female L136 trapped with a male L66. I first thought that due to their differences nothing would happen. A day or two later the female was out. I did check in the cave and I saw about 20 eggs of about 3mm of diameter. Even if I disturbed the male, he never ate the eggs and was taking good care of the eggs.



L136 X L66a

I believe this happened because of several reasons. The first one was that the dominant male in the tank was clearly this L66 male. He had the darkest colouration; his whole body was covered with odontodes. The other L66 males were rather lighter in colouration and almost no odontodes were present, at least on the plates. The females were also probably at that time not fully mature. My L136 males were also being dominated by the L66. I never found one of them in a cave. One of the L136 female was clearly ready to spawn and choose the only male that was "available" or ready to spawn also.

After about 8 days, the eggs hatched. I let the eggs with the male for about a week and then I managed to take them out of the cave for rearing them separately. At this time they could be easily taken for young *Hypancistrus zebra*.

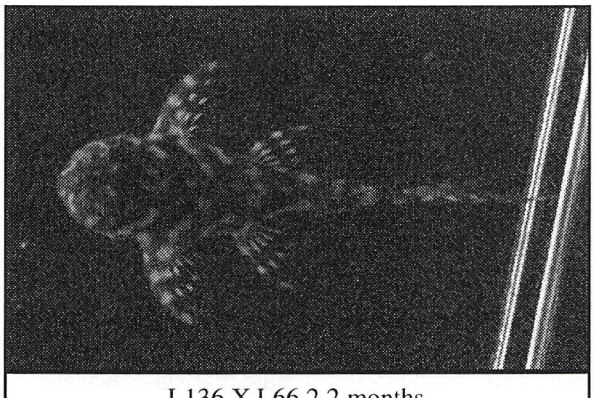


2 weeks L136 X L66

They were placed in a separated floating plastic nursery. Just before they had almost completely absorbed their yolk sac, the young start dying in mass, I checked for the different water parameters but everything was fine. Still I only managed to save one young. I don't know if these are more fragile than others, but compared to L28 and L260, two other undescribed species of *Hypancistrus*, the young were looking as hardy as the others. This remains a mystery for me.

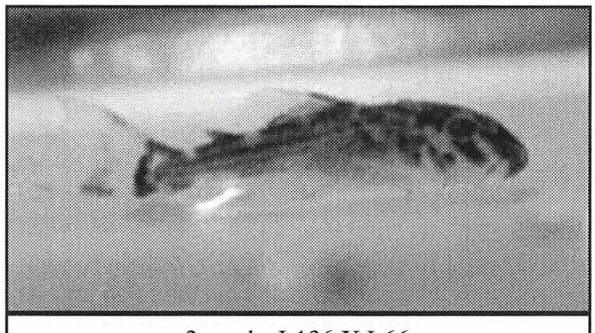
Anyway, the remaining fish finally absorbed the yolk sac, and was fed with spirulina tablets fragments, chopped bloodworms, and small pellets for fry. With this food, he grew pretty well; at about the same rate than other *Hypancistrus* species. At this time they were rather looking like miniature copy of the father. Still one or two spot like form could be seen.

As time was passing and as he was growing, I could see that the overall colouration was more black than white, the lines were disappearing to let spots taking the place. Only the fins have the typical pattern of the L66, with these white and black lines. Most of the white lines on the body have totally disappeared. There are many white spots and several lines that look like spots, which are in fact interrupted lines.



L136 X L66 2.2 months

I firstly regretted that that crossbreeding happened, as I like to keep good strained of my fish, but now I must admit it was an interesting experience. The fruit of this unusual spawn is a curiosity. It also a good thing to have such fish referenced, as with the more and more popularity of these fish, people could be tented to create new and rare species. I sincerely discourage people to intentionally cross species, and if it happened by accident, the young should at no point be sold to someone else. There is enough species in the wild to please anyone and it is not necessary to create some new ones. Several people have also told me that I should have kept more youngsters. So then I could have tried to make them spawn, this way we would have know if they were fertile. We also could have tried to make them spawn with their parents. This would have helped to determine how closely related are the two species. But like I said I am not found of crossbreeding, and I do my best to avoid such thing to happen.



2 weeks L136 X L66

I have since then separated both species to avoid such thing to happen again. I still keep other species of *Hypancistrus* together and no further crossbreeding has been noticed. Still I watch with a close eye to make sure it won't happen again.

CATFISH STUDY GROUP

AGM

Sunday 1300 hrs

18 January 2004

St Elizabeth's Parish Hall

The Case of the Ancistrus Assassin

Joe Graffagnino

This strange, twisted and bizarre case of murder and mayhem started about three (3) years ago. I ventured into a tropical fish auction and discovered, much to my delight, a group of five (5) bushy nose Ancistrus up for auction. The fish were approximately 3 inches in length and two (2) of them were sporting their trademark bristles. I have heard from other hobbyists that these fish are easy to breed, maintenance is next to nothing and they will eat anything. I learned later that whoever sold me this "bill of goods" did not have these particular fish in mind.

I said to myself that I must have these little beauties, at almost any cost. I had a nice 20-gallon long, filled with clay pots, ceramic logs and algae covered stones just waiting for this algae eating, hide and seek, catfish. I was also thinking that spawning these fish would give me the fifth (5th) type of catfish or loach spawning that was required for my hobbyist clubs "Breeder Specialist Award. I figured that I could earn some easy BAP (Breeder Award Points) scores and obtain a coveted "Specialist Award" in the process. My greedy little mind started adding up the points these beauties would obtain for me, even though I still didn't have them yet. I also thought of the great prestige of having the rare "Specialist" award presented to me. This was not just any "Specialist" award; oh no this was for CATFISH! This would be quite an honor. After all, almost anyone could spawn cichlids or livebearers or even propagate plants, but only the best were able to breed CATFISH!

I could hardly contain myself when the group came up to the auction block. The auctioneer started the process by stating how wonderful these fish were and that they would be interesting, if you ever saw them after placing them in an aquarium. He droned on about the only time that you saw them was when they died. He mumbled about they were fussy eaters and defecated a lot. He was not the type of auctioneer I would want to have trying to sell my fish. He was like a screen door salesman for submarines. Anyway the bidding started at $3.00. I immediately wanted to eliminate the competition by making a "jump bid" of $5.00. Well this had the desired effect because no one else bid on them. "Those fools, what were they ever thinking?" "Don't they realize they are letting these classic beauties slip out of their grasp for "loose change"?" Well their loss is my gain. I immediately paid for them and left for home with my prize bag of future BAP points.

I performed the "drip" method of acclimating these little wonders into their new home. It took several hours, but I didn't want anything happening to these treasures. They immediately loved their new home. They quickly disappeared under rocks, into caves and hid themselves very effectively. For several months the only time I had the opportunity to see them in action was with the lights out, using a flashlight with a red lens cover on and after feeding algae wafers and frozen zucchini tied to rocks. It was interesting to note that one of the males was pushing out the other male and the females when it came to feeding time, I believed that this was just a "macho" display of bravado to impress the ladies. Little did I realize that this was a small sign of what was to come?

One afternoon I had to move my little family of Ancistrus to a smaller home. I had to move them because of a recent explosion of newborn fry from multiple African cichlids. I needed "grow out" room and I needed it quickly.

I moved the Ancistrus family into a 10 gallon wide, but to compensate I added more hiding places and an additional overflow filter. They seemed content.

Two days later when I returned home from work I went to feed the fish and all the fish were dead, except for one male. The bodies were strewn all over the tank. There were bite marks and blood along with the beat up bodies. I thought that there was breeding or spawning ritual that had gotten out of hand. The lone remaining male refused to come out of his clay pot. I believed that he was either very afraid of what had happened and that he had only gotten caught up into the ecstasy of the spawn or that he was remorseful of what he had done and was seeking solace or penance for his wrongdoing.

I let a few months go by and when the fry problems resolved themselves I returned the male to his original 20 gallon long. Much to his delight I had obtained, from a local pet shop, a pair of females; one his size and one slightly larger. I figured that they could take care of themselves. All was fine for several months and then I was asked to "loan out" my smaller female ancistrus to a good friend. Now there was only the two of them.

Several months went by with the two fish getting along famously. The male would allow the female near his clay pot and on the wood piece adjacent to his home. He never bothered her. They would eat frozen bloodworms and zucchini together, the seemed like the perfect couple. I could hear the "pitter patter" of little baby ancistrus any day now. The male would be out more eating and seeming to store up food reserves for the soon to come day of nest guarding.

After about a week I went to see how the "newly weds" were behaving and I could not find the female anywhere. The male was in his clay pot and he was not coming out. I finally found the female wedged into a conch shell. She was inside as far as she could go and could not back out. I could not understand why this had happened? I had to resort to using wire cutters to cut her out. She was just barely breathing. She was beaten and bloodied. After I freed her, she died. As I turned her onto her back I noticed a string of yellow eggs still attached to her breeding tube. I assumed that the male was guarding the nest in the clay pot. I saved and froze ten (10) eggs to remind me of this day. I gave the male two weeks. I then investigated the clay pot.... NO EGGS! Why that murdering bastard! He killed again. I realized then and there that there was no saving this evil creature from himself. He only lives for the thrill of killing. I was strongly tempted right then to remove the brute and bounce him off the floor and walls. I then realized that I would be no better than he. I had to think of what justice I could meet out to this sucker-mouthed assassin. There was a fish auction coming up for that weekend. I got an idea!

The Sunday of the auction I woke extra early so I could triple bag my ancistrus. I tossed into the bag a couple of Jungle Labs oxygen tablets and added a mild sedative. I wanted this murdering pescadore healthy but subdued. I arrived at the auction and was about to enter my ancistrus into the bags of fish going to the auction block when I noticed a little boy of about ten (10) years old standing on the side. I asked him what he was doing and he said that he was with his daddy and wanted to bring a fish home for his new tank. I asked his dad what type of fish he was keeping. He said that he has a group of South American cichlids called Heros or Cichlosoma dovii. The dominant male was huge, measuring over two feet in length and beats the hell out of anything going into his domain.

I said "Wow, what a coincidence? I have just the fish for you!" Let your dovii try to beat up on this sucker catfish! This little ancistrus could withstand anything he had to offer and come back for more. The father looked a little skeptical as I showed him the bag my little murderer was in. I said that don't let size fool you, this little guy was a bundle of dynamite. The father asked his son if this fish would be the one he wanted and the son was overjoyed. The father insisted that in order to have a deal he must make his son pay for the fish. I said that since it is your son's fish I would let him have it for 10 cents (one cent for each egg I froze). The boy paid me and I gave him the fish. The ancistrus had what appeared to be a sly smile on his face, probably anticipating the new havoc he would wrought on his unsuspecting tank mates. As I saw the father and son leave with their prize I could help but think that there is justice after all, now that ancistrus will get his butt kicked over and over again. I turned to see the little boy was rapidly jerking the bag to make the fish "move" in the bag, as he walked to the family car. I smiled as I thought that there is a "pay back justice" even for fish.

I left the auction with a bag of whiptail cats. I was now ready for a catfish that seemed to be on tranquillisers. If I get babies great, if not that's OK also. Be careful the next time you seek out ancistrus catfish, they may contain one that is an ancistrus assassin!

Catfish Convention 2004

I have heard that there is going to be the first International Catfish Convention next year in the USA, and I started to try to find out a bit more about it. What follows is a reply from the President, Potomac Valley Aquarium Society who are organising the event. Anyone interested?

'You are absolutely right that we are having a Catfish Convention and we are very excited to have some aquarium hobbyists coming from across the pond to attend!

It will be October 15-17, 2004 in Laurel, Maryland, which is halfway between Baltimore and Washington, DC. The closest airport is Baltimore/ Washington International (BWI).

We will have some information up on the web shortly (in the next week or so) with more details but to briefly outline the activities, we will be starting with speaker seminars on Friday afternoon and will continue through Saturday evening. We have 8 different speakers on a wide variety of catfish topics. Earlier in the day on Friday we will have a number of field trips for those people who show up early to choose from. Saturday evening there will be a banquet. Sunday is an all-day auction for fish and plants. There will be two fish shows, one exclusively for catfish and one for all other freshwater species. We'll also have some manufacturers' representatives with product displays.

Keep an eye on www.pvas.com for updates in the next couple of weeks.

Thanks for the inquiry; I hope to meet you and some other catfish enthusiasts from Europe next October!

Andrew Blumhagen,

President, Potomac Valley Aquarium Society

Group Notes

1. It has been suggested a Members Only auction takes place at the monthly meetings. Members can submit one box of fish and/or plants. Items will be available to guests/visitors. This will start in January.

2. 

You will notice that a sample pack of Tetra wafers has been included with this issue. Tetra have asked that members give some feedback regarding their reactions to the food. There are a total of four **Tetra fish foods** which are aimed at the catfish end of the market, these are: **Prima** (granules), **Plecomin** (sinking algae food), the well known **Tabimin** and **Fresh Delica** (whole bloodworms). Comments can be passed on to the Chairman, Ian Fuller or the Editor, Bill Hurst.

3. It has also been suggested that we have a Breeders Directory. I think that everyone is aware that a regular For Sale column is impractical because of the time between the advert and the publishing date of the journals. Members will then be able to track fish for sale before it's too late, or question the breeder about conditions etc. (The advert below is a recent request and the fish are available at the time of going to press).

FOR SALE

Seven Zebra Plecs
sold as group £210.00
Buyer collects.

Gordon Alexander
Shire Barn
5 Grammar School Road
North Walsham
Norfolk
NR28 9JH
Tel: 01692 400954

CONVENTION 2004

SUNDAY 21 March 2004
at
LOWTON HIGH SCHOOL
(Sign posted off the A580 from the M6 J23 towards Manchester)
NEWTON ROAD
LOWTON
WIGAN

Doors Open At 1000 hrs

Shane Linder

Our regular Cat Chat contributor from the USA who will be talking about his experiences in Venezuela and fish collecting

and

Dr Gordon McGregor-Reid

The Director of Chester Zoo

Entrance Fee

Members £5.00 **Non-Members £6.00**

Also:

Bring and Buy

All-Day Canteen serving Hot and Cold Food and Drink

CATFISH STUDY GROUP (UK)
Formerly the Northern Area Catfish Group

OPEN SHOW RESULTS 2003

1	ASPIDORAS	ENTRIES 3		
1	Gavin Cowan	Solway	A depinnai	84.5
2	Gavin Cowan	Solway	A depinnai	80
3	Adrian Taylor	C.S.G.	A pauciradiatus	79.5

2	BROCHIS	ENTRIES 4		
1	Allan James	C.S.G.	B britskii	75.5
2	Ray Blackburn	Castleford	B multiradiatus	74.5
3	D & L Speed	C.S.G.	B splendens	74
4	B&S Chrich & I Wright	Sutton	B splendens	70

3	CORYDORAS "A"up to 57mm	ENTRIES 5		
1	D & L Speed	C.S.G.	C napoensis	83
2	D & L Speed	C.S.G.	C meleni	81
3	Allan James	C.S.G.	C reynoldsi	72.5
4	F Taylor **J**	C.S.G.	C arcuatus	72

4	CORYDORAS "B" over 57mm	ENTRIES 12		
1	D & L Speed	C.S.G.	C concolor	82
2	Bernard O'Neill	Workington	C zygatus	80.5
3	Bill Ward	Club 2000	C delphax	80
4	D & L Speed	C.S.G.	C seussi	78.5

5	CORYDORAS TYPES	ENTRIES 1		
1	Adrian Taylor	C.S.G.	Corydoras sp. C92	79

6	A.O.V. CALLICHTHYIDAE	ENTRIES 1		
1	D & L Speed	C.S.G.	Dianema urostriatum	78

7	ASPREDINIDAE	ENTRIES 2		
1	Trevor Morris	C.S.G.	Amaralia hypsiura	72
2	B&S Chrich & I Wright	Sutton	Dysichthys coracoides	71

8	AUCHENIPTERIDAE	ENTRIES 2		
1	D & L Speed	C.S.G.	Trachelyichthys exilis	69
2	D & L Speed	C.S.G.	Tati intermedia	62

9	BAGRIDAE	ENTRIES 2		
1	Ray Blackburn	Castleford	Pseudomystus stenomus	82
2	P Aspinall	C.S.G.	Auchenoglanis occidentalis	80

10	DORADIDAE	ENTRIES 4		
1	Brian Wilson	Club 2000	Amblydoras hancocki	84
2	Roy Blackburn	Castleford	Ancanthodoras spinos-simus	73
3	Gavin Cowan	Solway	Platydoras costatus	72
4	P Aspinall	C.S.G.	Agamyxis pectinifrons	70

11	LORICARIIDAE up to 130mm	ENTRIES 10		
1	Roy Blackburn	Castleford	Parotocinclus maculicauda	86
2	P Aspinall	C.S.G.	Hypancistrus zebra	82
3	D & L Speed	C.S.G.	Pekoltia braveri	81
4	D & L Speed	C.S.G.	Pekoltia oligospila	80

12	LORICARIIDAE over 130mm	ENTRIES 10		
1	Bill Ward	Club 2000	Ancistrus dolichopterus	84
2	P Aspinall	C.S.G.	Panaque nigrolineatus	82
3	P Aspinall	C.S.G.	Scobiancistrus auratus	81.5
4	P Aspinall	C.S.G.	Hypostomus margaritifer	81

13	LORICARIIDAE L&LDA Nos up to 130mm	ENTRIES 10		
1	P Aspinall	C.S.G.	L260	85
2	D & L Speed	C.S.G.	L72	84.5
3	D & L Speed	C.S.G.	L260	84
4	Gavin Cowan	Solway	L128	83.5

14	LORICARIIDAE L&LDA Nos over 130mm	ENTRIES 7		
1	Gavin Cowan	Solway	L144	82
2	P Aspinall	C.S.G.	L3	81.5
3	Gavin Cowan	Solway	L144	81
4	P Aspinall	C.S.G.	L85	80.5

15	MOCHOKIDAE up to 130mm	ENTRIES 6		
1	Allan James	C.S.G.	Mochokiella paynei	80
2	D & L Speed	C.S.G.	Synodontis aterrimus	79
3	Ray Blackburn	Castleford	Synodontis batesii	78
4	B&S Chrich & I Wright	Sutton	Synodontis petricola	77

16	MOCHOKIDAE over 130mm	ENTRIES 11		
1	D & A Blundell	C.S.G.	Synodontis alberti	84
2	B&S Chrich & I Wright	Sutton	Synodontis sorex	82
3	Brian Wilson	Club 2000	Synodontis alberti	81
4	Allan James	C.S.G.	Synodontis schoutendeni	80

17	PIMELODIDAE up to 100mm	ENTRIES 5		
1	Brian Wilson	Club 2000	Brachyramdia meesi	83
2	Roy Blackburn	Castleford	Microglanis parahybae	82
3	B&S Chrich & I Wright	Sutton	Brachyramdia meesi	80
4	D & L Speed	C.S.G.	Microglanis iheringi	79

18	PIMELODIDAE over 100mm	ENTRIES 4		
1	P Aspinall	C.S.G.	Aguarunichthys tocantinensis	85
2	P Aspinall	C.S.G.	Pimelodus pictus	84
3	D & A Blundell	C.S.G.	Pseudopim. zungaru bufonias	82
4	B&S Chrich & I Wright	Sutton	Pseudopim. zungaru bufonias	80

19	COLDWATER CATFISH	ENTRIES 0

20	SPECIAL – UNIDENTIFIED	ENTRIES 4		
1	Roy Blackburn	Castleford	Synodontis sp	74
2	Roy Blackburn	Castleford	Hara sp	73
3	Roy Blackburn	Castleford	Microsynodontis sp	72
4	D & L Speed	C.S.G.	Synodontis sp	71

21	A.O.V. CATFISH	ENTRIES 7		
1	Roy Blackburn	Castleford	Hara filamentosa	86
2	Roy Blackburn	Castleford	Hara horai	85
3	D & L Speed	C.S.G.	Hara horai	81
4	Trevor Morris	C.S.G.	Chaca chaca	78

22	PAIRS - ASP/BROCHIS/CORYS	ENTRIES 3		
1	Brian Wilson	Club 2000	C elegans	82
2	Adrian Taylor	C.S.G.	C metae	75
3	Allan James	C.S.G.	C reynoldsi	74

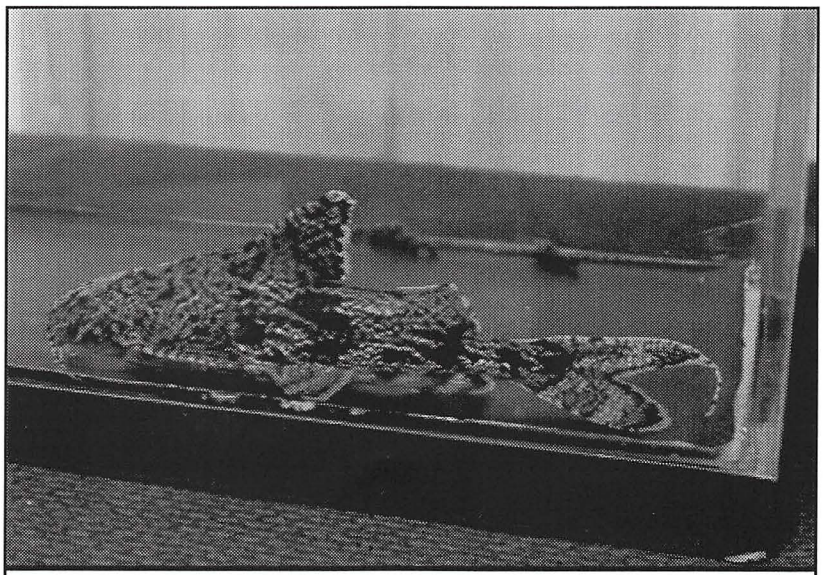
23	PAIRS – AOV CATFISH	ENTRIES 5		
1	P Aspinall	C.S.G.	L144 ancistrus sp	79
2	Roy Blackburn	Castleford	Pseudopimelodus pulcher	78
3	Trevor Morris	C.S.G.	Buno. verrucosus scabrceps	75
4	P Aspinall	C.S.G.	Hoplostrnum thoracatum	70

24	**BREEDERS** ASP/BROCHIS/CORYS	**ENTRIES 2**		
1	Allan James	C.S.G.	C reynoldsi	77
2	Adrian Taylor	C.S.G.	C metae	75

25	**BREEDERS - A.O.V. CATFISH**	**ENTRIES 5**		
1	D & L Speed	C.S.G.	L134	**93**
2	Bob Barnes	C.S.G.	Synodontis petricola	**90**
3	Adrian Taylor	C.S.G.	Hara hara	88
4	Gavin Cowan	Solway	Ancistrus temminckii	85

26	**FAMILY CLASS** Pair & Breeders Team	**ENTRIES 2**		
1	Adrian Taylor	C.S.G.	Hara hara	77.5
2	Adrian Taylor	C.S.G.	Corydoras metae	70

27	**BREEDERS – MASTER CLASS**	**ENTRIES 0**



Best In Show ***Hara filamentosa***
Image by Alan James
http://www.scotcat.com/catfishstudygroup.htm

SPECIAL WINNERS 2003

Best Fish in the Show. The TetraMin Award

Roy Blackburn of Castleford for a Hara filamentosa (Class 21)

Brian Wilson of Club 2000 for a Amblydoras hancockii (Class 10)

P Aspinall of C.S.G. for an Aguarunichthys tocantinensis (Class 17)

Best Breeders, The Linnaeus Award presented by TetraMin

D & L Speed of C.S.G. for their team of L134

Best Overall Synodontis Species, presented by LMB Aquatics

D & A Blundell of C.S.G. a Synodontis alberti

Best Catfish Over 300mm – J T Morris Trophy

P Aspinall of C.S.G. for his Auchenoglanis occidentalis

Highest Pointed Exhibit (Not a single fish) – Clint Cup

D & I Speed of C.S.G. for Breeders team of L134

Junior Trophy – Amanda Junior Cup

F Taylor, C.S.G. for his Corydoras arcuatus

SPECIAL CHOICES 2003

Secretary's Choice, donated by A & D Hodges

P Aspinall of C.S.G. for his P terosus (Class 18)

Show Secretary's Choice, presented by B Baldwin Trophy

D & L Speed of C.S.G. for Breeders Team L134 (Class 25)

Social Sec's Choice, presented by J & J Mead plaque

D & A Blundell of C.S.G. for Pseudopimelodus zungaro bufonius (class 16)

Chairman's Choice, presented by George Waterhouse

Roy Blackburn of Castleford for Hara filamentosa (Class 21)

Editor's Choice, presented by A M Taylor

Adrian Taylor of C.S.G. for his Hara hara breeders team (Class 25)

Zoukai Choice, presented by A & L Morris

D & A Blundell of C.S.G. for Pseudopimelodus zungaro bufonius (class 16)

President's Choice, Masterstaff Trophy

Gavin Cowan of Solway for his Leporacanthicus galixius (Class 12)

MIDLAND WATERLIFE

20 THE STRAND BROMSGROVE WORCS B618AB

TEL. (01527) 879207 FAX. (01527) 833601

OVER 50 TYPES L NUMBER PLECO'S CURRENTLY

NOW IN STOCK

L014

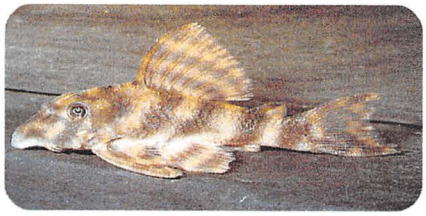
L015

L024

L29

L270

L46



L49

L47

L75

L264

LDA02

FULL RANGE OF TROPICAL FISH STOCKED WITH NEW SHIPMENTS ARRIVING WEEKLY.
(CALL BEFORE TRAVELLING TO AVOID DISAPPOINTMENT)

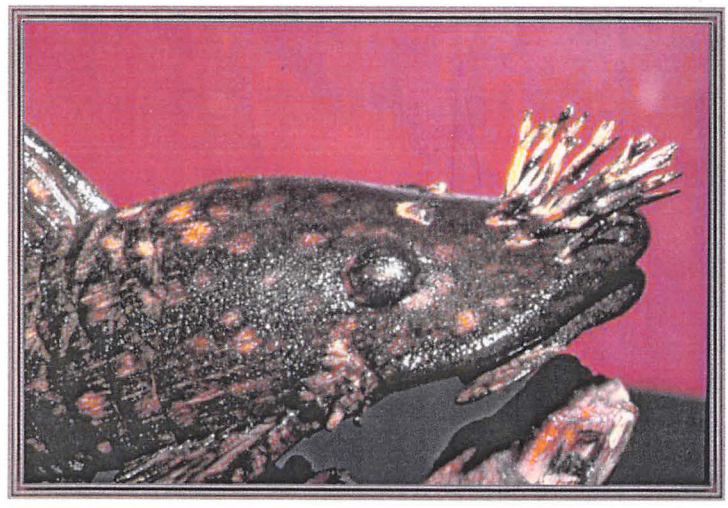
A FULL COMPLIMENT OF DRY GOODS STOCKED.

GROUP/CLUB VISITS BY APPOINTMENT PLEASE.

GOOD DISCOUNTS FOR CSG(UK) MEMBERS.

PICTURES COURTESY OF AQUALOG

BEST PRICES AND QUALITY GUARANTEED



G.B.W

Products & Services

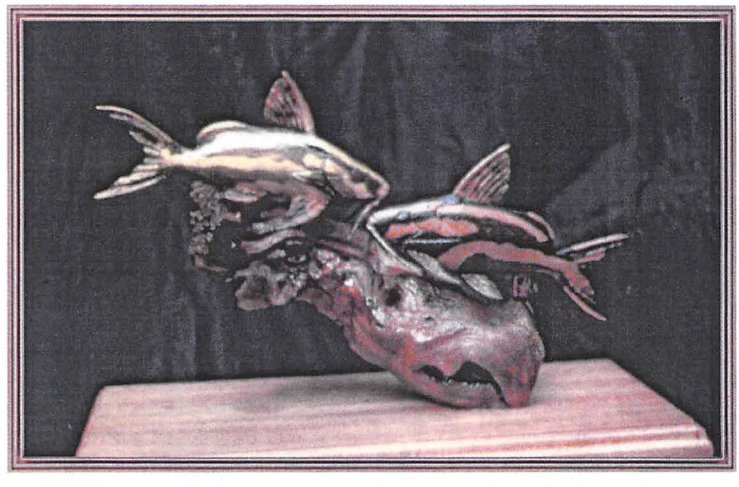
THE GUILD OF
MASTER CRAFTSMEN
CERTIFICATE OF QUALITY
AND SERVICE

High class joinery

Cabinets Furniture

Wood carvings

COMMISIONS UNDERTAKEN



Write to: Brian Walsh
9 Marsh Terrace
Darwen
Lancs
BB3 OHF

Phone: (01254)776567
Mobile: 07977 428 788
Email: g.b.w@brianwalsh1.
Freeserve.co.uk