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# The Journal of the Catfish Study Group (UK)

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# In Search of the Lost World of Loricariids

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#### **The Editors Bit**

#### **Dear Members**

Well there's plenty going on as I go to press, what with the World Cup, the TT Races and the Queen's Golden Jubilee, I nearly forgot the time of the year.

It's not the CSG's Golden Jubilee but this is actually the 10th issue of Cat Chat (Cat Chat's TIN Jubilee) and we're still going strong.

After all my pestering, some members have actually responded to the Meet the Members page. Education is not dead and aquarists can write, proving beyond doubt that schooling, albeit a long time ago for some, did work. However, articles are still welcome and I can never have enough on hand for future journals. Ian Fuller has started up his own website for Corydoras. The site is not yet complete but there are some interesting photographs of unidentified Corydoras. There is a link from Planetcatfish and Scotcat.

Don't forget the Open Show In September. It will be at St Elizabeth's Parish Hall again which has proved to be a suitable venue for both the Show and the Auction. Adverts for each event can be found in this Journal.

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

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Designed by Kathy Jinkins.

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### 2002

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#### cat chat

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# From the Chair



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Welcome everyone, to this the second issue of 'Cat Chat' 2002.

We now have a new Treasurer, all be it temporary until the end of the year. Danny Blundell kindly stepped in to fill the post that Bill Hurst vacated at the AGM following a four-year stint in the job. A job very well done I may add and I would like to take this opportunity to thank him for his work keeping the group on the financial straight and narrow.

Now I would like to inform all UK members, that at the end of the current year there are three major committee positions that will need to be filled. I decided to mention it here, so that you are all aware of the situation we will be facing at the end of the year. If these positions are not filled then we, as a group, will struggle to exist. I am asking for any members who have a little time to spare, as well as being able to regularly attend monthly meetings, to give some thought to taking the positions which are becoming vacant, these are: - <u>Secretary</u>, <u>Membership Secretary</u> and <u>Treasurer</u>. Any member interested in putting their name forward for any of the positions and would like to know a little more about what is required, feel free to contact me either by e-mail or phone (07976 814387).

**March**: This was our Spring Auction meeting, an event that has always attracted good support from our members and the general fishkeeping hobbyists. Our auctioneer from Preston, Steve Spencer did us proud as usual, getting through a total of fifteen lots in what seamed like no time at all. I would like to thank Roy & Dave Barton for their organisation in booking in the lots and maintaining the flow during the auction, the runners for making sure all items went to the right people and, most importantly, the right money was collected. Bill Hurst for agreeing to continue totting up the finances for each lot and making sure everyone concerned received the right amount of money. Finally the canteen staff. I know I've said it many times before, but with out their dedicated help our events would soon fall flat. Again thank you all.

April: This meeting had been re-scheduled for the 28th, a week later than our normal third Sunday of the month. The reason for this being a clash with two other major events. The subject for the meeting was Showing & Judging catfish. Brian Walsh, the group's Show Secretary, gave us all a good insight into the various points a judge is looking at and how they go about assessing a fish's qualities, or lack of them. Brian also brought along what was effectively a suitcase full of catfish related books, which he felt was necessary today for a judge to be able to identify some of the many diverse catfishes within the hobby. After Brian had given his talk a general discussion took place with some interesting subjects being raised. The most interesting of these being about some of the methods which competitors use to get their fishes to show of to their best.

**May**: This meeting was about fish photography or, more precisely, catfish photography. For this we had Danny Blundell giving us an in depth look at the wide range of equipment he uses. Camera's, lenses, flash guns, tripods and a whole load of other ancillary equipment. I thought that some of my catfish were expensive but compared to photography, my hobby is relatively cheap. After the break Danny gave us a slide show, in which he showed us various slides displaying the results of many of the problems encountered trying to photograph fish through the sides of an aquarium. Several discussions took place and I'm sure that many of us learned a lot more about how to take better pictures of our fishes.

Until next time happy catfish keeping

lan Fuller

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# **MEET THE MEMBERS**

### **Danny & Ann Blundell**

Ann and I started our hobby way back in 1968, looking after our daughter's goldfish in a bowl. The bowl was quickly superseded by an 18" x 12" x 12" angle iron tank, housing a collection of guppies supplied by her godfather - but no catfish.

A new job and house relocation meant more room, therefore the hobby expanded to 20 tanks in the dining room and two more in the living room, with the odd catfish resident.

After a visit to our parents in South London, we were returning home to Oxfordshire, when we saw a notice on a lamppost saying 'CAGB Catfish Show', and in we went. Our fish keeping lives changed, not only by the variety of specimens we saw, but also by the friendliness of the people who kept them.

Over the following years, we moved homes and built several 'Fish Houses' with a catfish bias. Our last move saw us emigrate north to Heysham in Lancashire and we subsequently joined the NACG which evolved into the CSG (UK). We have been active committee members for many years, holding several posts but at present Ann is Assistant Show/ Trophy Secretary, and Secretary, whilst I am Vice-Chairman, we also post you your magazine.

Our other hobbies include Gardening (we have a 2000 gallon Koi pond); Landrovers (we have Hers 'n' His); we both enjoy travel and photography. The latter enables me to photograph gardens, plants, ponds and, of course, CATFISH. You have probably seen many of my slides which I inflict on unsuspecting aquarists when I give talks around the clubs.

Over the years we have kept many different species, and bred a few catfish, which include Corydoras pygmaeus, C. paleatus, C. aeneus, Ancistrus temminkii (normal and albino) and Sturisoma panamense.

At present we are renovating the Fish Room, with the intention of removing the smaller tanks which are labour intensive and replacing them with larger units. We will report back if we are successful.



# MEET THE MEMBERS

#### **Jeff Cain**

A regular member at our monthly meetings from the Northeast

I first started fish keeping 15+ years ago with a 2ft aquarium, then another and then a 4ft.

On returning home one day, I found that one of the tanks had leaked all over the carpet. My wife sent me to the garage. I then purchased some dexion shelving and that's when the hobby got hold of me.

Week by week the number of tanks increased until the 'garage' was bursting at the seams.

Three years ago I built another fish house on the side of the garage. It's 16 feet long by 4.5 feet wide, a one person fish house. The tanks are 4 tier consisting of eight 4' x 1' x 1', two 3' x 1' x 1', three 2' x 1' x 1', and one 7' x 1' x 18". Just to keep my wife happy I have one 5' x 18" x 1' in the house which is my Corydoras show tank.

My first experience of breeding fish was with good old faithful guppies - Didn't everyone? - I gradually moved on to platies, swordtails, angels and other cichlids.

In order to learn more about fish breeding/keeping, I visited every shop and show that I possibly could and read just about all the books available. I also enjoyed meeting other fish keepers.

Today my main interests lay with catfish, mainly Cory's, whiptails, hoplo's and bristlenoses.

In conclusion, I will take this opportunity to thank the CSG members who have helped me out with my hobby. It's great to come to meetings where we can discuss our hobby and have good members who work hard to put on slide shows and talks. Can't wait for the next meeting.

# Catfish Study Group (UK)



# 16 SEPTEMBER 2002

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# **Chaetostoma, the Mountain Plecos**

#### R. Shane Linder

The genus *Chaetostoma* is fairly large consisting of 42 currently recognized species. They are found on both sides of the Andes from Panama to Bolivia, but are particularly concentrated in Colombia and Venezuela. *Chaetostoma* are typically found in mountainous streams and rivers and have been recorded from altitudes as high as 3,500 meters. In the aquarium trade they are sold as rubber plecos, mountain plecos, or most commonly, bulldog plecos. Throughout Venezuela they are known as corronchos, a term applied to almost all robust-bodied loricariids.

Chaetostoma have three particular uses to mankind. Perhaps in their most important capacity, they serve as a source of food. In Venezuela, young boys wade mountain streams to collect Chaetostoma for the dinner table. Their method is simple; they walk along the creek placing their hands under stones and feel around for the loricariid. When one is felt, the fish is quickly grabbed and then placed in a jug or a pocket. The little meat that the fish offer is eaten in a soup. Secondly, Chaetostoma are used to keep water cisterns free of algae and insect larvae. Many families in the mountains collect rainwater for drinking and washing in a cistern. The cisterns can be made out of anything imaginable from old barrels to sheets of plastic lining a hole. Chaetostoma, and often other loricariids, are then added in an effort to keep the cistern clean. Of course, in their final capacity they are kept as interesting aquarium specimens.

*Chaetostoma* are among my favorite loricariids to collect. This is mainly because of the environment where they are found. *Chaetostoma* make their homes in fast flowing creeks and smaller rivers in the mountains and foothills. These areas are much cooler and less humid than the lowland jungles and plains where many other loricariids are found. This more hospitable climate makes for a much more enjoyable day in the field. Ambient temperatures in these areas range from the mid 70s to the low 80s while the water temperature may range from the low to high 70s

depending on how long it has been since the run off from the last rains came through. These environments can change very rapidly as they are the drainage channels for tropical rains in the higher cloud-cloaked mountains.

The Rio Zuata, near the town of San Casimiro, Venezuela provides a good example of typical Chaetostoma habitat. From this section of the river I have collected *Chaetostoma milesi* and an apparently undescribed Chaetostoma species as well as Hypostomus and a dwarf Panaque species. When there have been rains in the past day or two, the river is about 50 feet wide and knee deep. The water cools to about 70 degrees and becomes brown-colored with suspended sediment. A few days later, the river narrows to 20-30 feet wide and the water is nearly clear with a temperature in the mid 70s. After five to six days without rain, the river narrows to 10-15 feet and, with the exception of a few pools, is not much more than ankle deep. At low water the temperature will reach the high 70s, pH remains about 7.5 and general hardness measures 70 ppm. The water is undoubtedly softer when swollen with fresh rain. The substrate is entirely composed of fist and larger sized stones. The sun shines brightly through the shallow clear water and the stones grow a healthy coating of algae, which in turn houses insects and their larvae, a combination that seems to provide just the right foods for Chaetostoma.

Low water is the ideal time to collect *Chaetostoma* because it is easier to move about the river and they are concentrated in the remaining riffle sections. Ideal collecting locations are where the river splits to form one large and one small channel. The current is always faster in the smaller channel and *Chaetostoma* collect in these areas in an attempt to find the most highly oxygenated waters. A three-person team best accomplishes collecting. A 4' by 4' or 4' by 6' seine with 1/4 inch mesh is ideal. With a longer seine it is impossible to keep the bottom of the net against the

substrate and the loricariids will just swim under the net.

Starting at the bottom of the riffle, both poles (known as brails) are set about three to five feet apart depending on the size of the seine. Then, with their free hands, both seine holders reach into the net and firmly hold the bottom against the substrate. The third person, known as the "kicker", then enters the water from the bank (so as not to scare off the fish) about six feet above the net. Quickly moving downstream, the kicker uses hands and feet to disturb the rubble on the substrate as much as possible. As soon as the kicker reaches the front edge of the net, it is rapidly pulled up from the water. It is key that the kicker not start too far from the net nor move towards it too slowly as the loricariids will quickly figure things out and swim up current and out of the net.

German expatriate Norbert Flauger recently introduced me to another very useful collecting technique. Norbert's technique relies on the natural reactions of loricariids. When the piece of wood or rock that a loricariid is attached to is moved a little, the fish normally "freezes" and only leaves its cover when it is clear that swimming away is the better defense. Making good use of this reaction, Norbert's technique is very productive. One collector takes a position up stream of a good flat rock while the other positions a 2' by 2' square or hoop net downstream from the target rock. The first person slowly lifts the rock about two inches off of the substrate while the net is pushed under the rock. Once the net is set up, the rock is lifted completely out of the water. The loricariids then make their run for it into the waiting net below. Using this method in the Rio Chirgua Carabobo State, Venezuela, Norbert and I caught ten Chaetostoma milesi and fifteen Ancistrus in less than an hour. The only drawback to this method is that it is backbreaking work, literally!

One look at the environment described above and it is easy to see why *Chaetostoma* are not ideal inhabitants for the typical community tank. In the wild, other rapids-dwelling loricariids are found in the same habitat as well as pimelodid catfish of the genus Rhamdia, pike cichlids, fast water tetras, and (believe it or not) guppies. However, all of these fishes seek June 2002 Vol 3 No 2

out areas in the river with more moderate currents. The ideal *Chaetostoma* aquarium would be a species tank that replicates their natural environment. The hobbyist could maintain a group of the same species (and possibly attain a spawning) or build a beautiful collection of many different *Chaetostoma* and other current loving loricariids such as *Pseudancistrus*, *Leptoancistrus*, *Cordylancistrus*, *Dolichancistrys*, and *Lithoxus*.

Besides needing a special captive environment, Chaetostoma present other challenges to the aguarist. It can be very difficult to get new specimens to eat. Frozen and live foods should provide the bulk of their diet. Nearly all species ignore any type of dry food, but this should not stop the aquarist from experimenting. They will occasionally take fresh vegetables such as cucumber and zucchini and these foods should be readily available to them. Algae is the best food and should be provided, at least as a supplement, if at all possible. One way to do so is to keep the aquarium brightly illuminated so that it grows as much algae as possible. A second method is to produce what I call artificial algae, another invention of Norbert's. То create artificial algae, simply grind up several algae tablets. Mix the ground algae with egg white and paint the concoction onto a flat rock. The egg white will dry and stick the ground algae tablets to the rock. Once dry, simply place the rock into the aquarium where the algae wafers will mimic natural algae and the egg white will provide protein. Always try to start with the healthiest fish possible, as even healthy Chaetostoma can be difficult for the first few weeks.

Breeding has been accomplished in the aquarium on a few rare occasions. Most of these that I am aware of were "accidental" spawnings and the fry proved difficult to raise. In Venezuela, observations have been made of *Chaetostoma stannii* spawning in the wild. Males defend nests under flat rocks and the eggs are typically laid in a single layer on the roof of the nest. Spawning *Chaetostoma* would certainly be a worthy goal for the advanced aquarist looking for a challenge.

Although hardly a fish for the average community tank, the genus *Chaetostoma* offers a number of attractive and interesting species for the specialist. SL

# In Search of the Lost World of Loricariids: An Adventure to the Potaro River, Guyana

Jonathan W. Armbruster, Department of Biological Sciences, Auburn University, Auburn, AL 36849, USA.

#### Abstract

In October 1998, a group from the Illinois Natural History Survey, Auburn University, The University of Guyana, and the National Geographic Society journeyed to into the jungles of Guyana in an attempt to retrace the journey of pioneer ichthyologist Carl Eigenmann 90 years earlier. Two of the main quests on this journey were the loricariid *Corymbophanes andersoni* and the probable astroblepid *Lithogenes villosus*.

It was a hot day in October, 1998, as we woke from a fitful night of sleep plagued by the city of Georgetown's infamous mosquitoes. We had packed all of the supplies we needed for the trip the night before and were ready to go. As we loaded all of the supplies and equipment onto the back of a Bedford four-wheel drive truck that still had a machine gun turret as a reminder of its days of service in the British army, we wondered how it would be possible to carry so much stuff deep into the jungles of Guyana.

Ninety years prior, the famous ichthyologist Carl Eigenmann had begun such a journey, and it was our job to recreate his journey as best we could because few ichthyologists had ventured into the Potaro River Basin since Eigenmann's time and none had made it above the towering Kaieteur Falls. On his journey, Eigenmann collected many new species, but given that his specimens are now in poor shape and that few people had been to the region to catch more specimens, we considered it necessary to revisit the area. We were even able to convince the National Geographic Society that the trip would be interesting, and they not only paid for the trip, but also sent a writer and a photographer along with us.

As for me, my main interests were with the loricariid fauna. In particular, Eigenmann described two new genera and species from above Kaieteur Falls, *Lithogenes villosus* and *Corymbophanes andersoni*, neither of which had been collected since. *Lithogenes* is particularly important to the study of loricariid catfishes because it is either the sister to all other loricariids, or it is a relictual member of the sister family to the Loricariidae, the Astroblepidae. As for *Corymbophanes*, no one had adequately determined its relationships, and, despite the fact that a couple of

people through the years had tried to describe species in *Corymbophanes*, it was clear that no other described species belonged in *Corymbophanes*.

So, a crew consisting of myself from Auburn University, Dr. Lawrence Page, Mark Sabaj, Michael Hardman, and Jason Knouft from the Illinois Natural History Survey, Waldyke (Wally) Prince from the University of Guyana, Fen Montaigne and Randy Olsen from the National Geographic Society, and our guides set off in the Bedford truck towards the mining town of Linden on the Demerara River. We collected around Linden and then took a school bus to the town of Rockstone on the Essequibo River where our adventure truly began.



It was at Rockstone that we began to realize that loricariids would not be very common in the Essequibo River. This fear began to surface when we went back into an oxbow of the Essequibo called Long Lake.

One of our favorite ways of catching catfishes is to find hollow logs and stick our hands inside of them and pull out any catfish that is hiding. We tried this technique in Long Lake and were not nearly as successful as we would be in similar places in Venezuela or Peru where we have worked. We did have some success, though. We captured a few specimens of Acanthodoras cataphractus, a doradid, a species that had never been collected in Guyana before, a specimen of the wood catfish Trachycorystes, a couple of Crenicichla (the pike cichlid which the Guyanese call sunfish), and a single specimen of Ancistrus. The Ancistrus would be the only one we would collect on the entire trip which we found perplexing because Ancistrus is often quite common. For our effort, each one of us were stabbed numerous times by the spines of palm trees. the tips of which break off in the skin and cause mild swelling.

Two days after reaching Rockstone, we loaded up two small boats, one with all of our gear and one with ourselves. The boatman built a makeshift canopy out of a green tarp and bamboo and we headed south, up the Essequibo River at the blazing pace of 4 km/hr. We had planned to make it to the Tumatumari Cataract on the first night; however, our snail's pace caused us to find a place to camp halfway to our destination. The campsite was on a large sandbar in the middle of the river and on the opposite shore was a small rapid. We rushed to the rapid in the remaining sunlight and were able to capture two specimens of Lithoxus lithoides. Lithoxus lithoides was described by Eigenmann based off of the many specimens he collected. It is a particularly flat loricariid that is fairly unique in that its diet consists mainly of insect larvae. I had high hopes for capturing Lithoxus on the trip. I had found what appears to be a respiratory stomach in Lithoxus and was hoping to get some specimens so that I could test whether or not they could breathe air. In my confidence that we would collect countless individuals later, we preserved the two specimens we collected. We would not see Lithoxus again.

The next day we made it to Tumatumari, the first falls on the Potaro River. As soon as we entered the Potaro, we knew that something was wrong. Where the water should have run black and clear like tea, the water had taken on a more tea-with-cream appearance. Near the mouth of the Potaro we saw the rusting carcass of an ancient gold dredger and the spoil piles of more recent dredging. Although the forests of Guyana are still largely intact, the rivers are suffering from the impact of gold mining. Large dredging platforms dot the Potaro from its mouth to above Kaieteur Falls while small-scale operators attack the small streams with high-pressure hoses that wash the banks away. This all increases the sediment load in the streams, but sediment might not be the most insidious element of mining. To separate the gold from the ore, mercury and cyanide are added. Cyanide may only cause short-term problems, but mercury stays in the system for a very long time. Could the absence of loricariids be due to the mining industry?

Our first stop on the Potaro River was the first falls, the Tumatumari Cataract. The Tumatumari Cataract is a series of falls that appear to limit the distribution of species in the upper Potaro. At Tumatumari, the fauna was not that diminished from what we found in the Essequibo proper, but above the falls, the fauna was drastically reduced. We collected both in the cataract itself, and along the beach below the cataract. In the cataract, we collected the two species of loricariids that appear to be doing well in the Potaro, *Hypostomus hemiurus* and *Rineloricaria fallax*, but no others.

In many ways, the Potaro River is less accessible today than in Eigenmann's day. Where Eigenmann was able to portage above Tumatumari, we were not. There was no support for boats from Tumatumari to above Kaieteur Falls. Instead, we had to boat back down to the Essequibo River, boat upriver a little further to a mining camp, and then rent vehicles to take us to the town of Mahdia. Mahdia is probably what Dawson City would have looked like in the gold rush days if it had been in the tropics. It was a rough town that mostly served as a supply depot for the miners. There, we got a new guide, Mack Bell. Mack is the captain (leader) of one of the largest Amerindian towns in the Guyana frontier. He was an invaluable aide for the rest of the journey.

The road continued to the Potaro River above Mahdia for a short distance. Well, it could hardly be called a road. We hired a couple of drivers with Toyota trucks for what would turn out to be one of the most exciting car rides I had ever taken. We all got into the back of one of the pick-ups, but I was the last one in and there was nowhere to sit. Instead, I had to stand, clutching to the roll bar, right behind the cab. The trucks took off down a jungle road with puddles up to the wheel wells and banks that had to be 45 degrees.

We eventually made it to a remote outpost called Pamela where we met up with a couple of boatmen who owned a couple of aluminum boats that made our first boats look like the Titanic. We would now have to shuttle our gear and people from site to site. Once back on the river, we made our way up to the next falls called Amatuk. At Amatuk, we caught our old friend *Hypostomus hemiurus* and also what may be an

undescribed species of *Parotocinclus*. My main goal at Amatuk was to collect *Lithoxus*. Eigenmann had collected over 100 specimens at Amatuk with the use of a fish poison made from vines. We were not allowed to use any fish poisons, but given that so many specimens had been collected at Amatuk in the past, I figured we would have no problem capturing some. After several hours of seining, we had collected none. I took to snorkeling and I think I turned over every rock in the rapids looking for *Lithoxus*, but never saw any. I can hardly be conclusive, but I think that the fish has been hit hard as have several other species of loricariids that were supposed to be in the Potaro but that we were unable to catch.

After a stop at Waratuk falls, we made it to the last place that boats could make it on the lower Potaro. The place is a rapid called Tukeit and we were now surrounded by the arms of the Potaro gorge. On the south bank, a small stream cascaded over the edge and entered the Potaro just downstream from Tukeit. From this point, we had to hike up the mountain with the goal of capturing Corymbophanes and Lithogenes, a goal that seemed more remote now that we had failed on so many species of loricariids. We knew that we could never carry all of our stuff up the mountain, so we had arranged for some Amerindians from Chenapou, a village above the falls, to meet us and give us a hand. We probably paid them more money than they had seen in the previous five years to help us with this most difficult leg of the journey. We started out in the morning before it got too warm, but the humidity was already oppressive and the path difficult.

Our incline ended with one final push up the mountain that the locals call "oh my god-oh my lord" which is about the only thing you can say upon completing the stretch. From there the path was not too bad and we were soon rewarded for our climb. We walked up to the edge of the gorge and stared back towards Tukeit and could barely see where we had started. Then, we turned to our right and there was Kaieteur Falls. The falls travel through mist, down through verdant green slopes to a crash pool 741 feet below. It was an aweinspiring site, but we were not yet at the lip of the falls. First, we stopped at a shop run by a woman named Desiree. There is a small community of miners at the top of the falls that also receive some business from the minor tourist trade of the falls. At Desiree's are some of the most desired substances of anyone that has been in the field too long, cold drinks. After soothing our thirst, we went to the lip of falls where we played at the edge and set up camp.

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The next day, we went with the Amerindians from Chenapou to their village. Although only 14 km away, the boat ride took us most of the day. Chenapou is a depressing community. The Amerindians there are incredibly poor and many spend much of their time drunk on a highly alcoholic drink called high wine. Tony Melville was the captain of the village and his desire for drink was great, but understandable. Mack's brother had been the captain of the village before Tony and he had been shot in the back of the head by miners over a dispute involving diamonds; Tony's job was incredibly stressful. But, the Amerindians were very friendly, and they helped us immensely with the last leg of our journey.

The next day we set out for Chenapou Falls (formerly Aruataima Falls), the place where both Lithogenes and Corymbophanes were collected. From the start, we knew we were going to have a hard time. We set the seine time and again and caught little or nothing. After a couple of hours of work, we just had a couple of Crenicichla and a pimelodid to show for our effort. We were all tired, most of us taking to sitting on the shore depressed, while I still hacked at the river with a dip net. Then, Mack suggested that there might be a better place upstream, I figured it pointless, but we trudged along among the massive boulders to a place where the river was not guite so wild. I smiled when I saw the place, and I knew that we would have success. We set the seine at the end of a bedrock shoot and I and a few other went upstream to kick the fishes down. When we lifted the net, I saw a black fish with white spots and new that one goal had been reached. I screamed "Corymbophanes!" like a wild man. A couple of seine hauls later, we collected Lithogenes. We were not able to catch many, but we caught enough.

When I went crazy over collecting the Corymbophanes, Fen asked "If you act like this over a described species, what would you do if you caught an undescribed one?" We would find out the next day. We set off with an Amerindian that went by the nickname of Old Kaie (like the Kaie of legends). Old Kaie was already very drunk that morning as he led us into the jungle. Our goal was a small tributary of the Potaro, Oung Creek (formerly Wong River). We hiked for about two hours before we found the creek. We set the seine in a sunlit riffle and again I kicked at the submerged structures to dislodge the fish. When we pulled up the seine, again, there was a black loricariid with white spots in the net. I realized instantly that it was Corvmbophanes, but was it the same one? We argued about it for awhile, but then it became clear that its color pattern and shape were very different

than *C. andersoni*, it was, indeed, a new species which we would come to call *C. kaiei* (see Armbruster et al., 2000) after the man Kaieteur Falls was named after (and partially after out guide). Although the legends vary, Kaie had gone over the falls in a canoe with all of his possessions in order to appease the god and bring peace to his warring people. Like Kaie, it seems that *Corymbophanes* has never made it over the falls and exists isolated in the upper Potaro.

That night, it rained. The waters of the Potaro rose quickly and we realized that we had made it to Chenapou just in time. If we had spent any more time in our journey, we would have never have been able to collect *Corymbophanes* and *Lithogenes*. We also realized that it was time to head back to Georgetown. We made it back to the falls, spending one more night there. The next day, we flew out from the top of the falls and could see the falls in all of their majesty. We flew down through the Potaro gorge passing over Tukeit, Waratuk, and Amatuk Falls in minutes, a journey we had just struggled to make slipped away with no effort at all.

Once back in the United States, the real work began. I prepared skeletons of Lithogenes and Corymbophanes so that I could determine their relationships. Just as Nijssen and Isbrücker (1986) had suggested, Lithogenes is an astroblepid and not a It has plates on the body while other loricariid. astroblepids do not, but clearly the other astroblepids had lost plates. Corymbophanes is the basal member of a group that includes the rest of the Hypostominae (minus some southeastern Brazilian genera that do not appear to belong in the Hypostominae) and the Ancistrinae (which actually belongs in the Hypostominae). Sir Arthur Conan Doyle wrote of a population of dinosaurs living on the top of a tipui in Venezuela just slightly east of where we were in "The Lost World". In reality, the lost world is the Potaro River above Kaieteur Falls where relictual loricariids dwell to this day.

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#### **Figure legends**

Feel free to use as many or as few of the pictures as you would like. I would recommend a plate with the two *Corymbophanes* and the *Lithogenes*. The scenery slides are in order from downstream to upstream.

Photo 1: *Lithoxus lithoides*, AUM 26018, 42.7 mm SL, from Essequibo River midway from mouth of the Potaro River and Rockstone. Photo by J.W. Armbruster.

Photo 2: *Hypostomus hemiurus*, approximately 130 mm SL, from Potaro River at Amatuk Falls. Photo by J. W. Armbruster.

Photo 3: *Corymbophanes andersoni*, topotype, AUM 28149, 64.9 mm SL. Photo by J.W. Armbruster.

Photo 4: *Corymbophanes kaiei*, paratype, INHS 49583, 70.0 mm SL. Photo by J. W. Armbruster.

Photo 5: *Lithogenes villosus*, topotype, AUM 28152, 30.1 mm SL. Photo by J. W. Armbruster.

Photo 6: Amatuk Falls, Guyana. The houselike structure is a gold dredger and the small islands around it are spoil piles from mining operations. Photo by J. W. Armbruster.

Photo 7: Jonathan W. Armbruster at Kaieteur Falls. Photo by J. W. Armbruster.

Photo 8: Kaieteur Falls. Photo by J. W. Armbruster.

Photo 9: Town of Chenapou. Daughter of Tony Melville, Captain of Chenapou, making the traditional cassava drink called casiri. Photo by M. H. Hardman.

Photo 10: Base of Chenapou Falls, type locality for *Corymbophanes andersoni* and *Lithogenes villosus*. Although not appearing particularly fearsome in this photograph, the substrate was made entirely of large boulders, the current was very swift, the water is deep, and most of the rest of the falls was even more unworkable. Photo by J. W. Armbruster.

#### INFORMATION SHEETS

Because of an error with the recent sheet numbers, we ended up with two numbered 24. To avoid re-issuing them, the correct sequence should be:

23 Synodontis flavitaeniatus.

24 Ageniosus marmoratus

25 Aspidoras raimundi



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# Notes on the Venezuelan Species of *Farlowella* (Siluriformes, Loricariidae)

#### R. Shane Linder

In 1996, Retzer and Page published their findings on the systematics of the stick catfishes of the genus *Farlowella*. Prior to this publication, there were no less than 37 described species of *Farlowella*. Eleven of these species were described from Venezuela. After a careful review of the previously described species, Retzer and Page validated 25 species in the genus, of which, eight are found in Venezuela. Retzer and Page divided the genus into seven species groups: *F. curtirostra* group. *F. mariaelenae* group, *F. nattereri* group, *F. acus* group, *F. amazona* group, *F. knerii* group, and a group of species of uncertain phylogenetic origins. In the paper, they also described six new *Farlowella* species.

Of the above species groups, members of the F. curtirostra, F. mariaelenae, F. nattereri, and F. acus groups are found in Venezuela as well as the species F. oxyrryncha (Kner, 1853) that is of uncertain relation to the known species groups. The F. curtirostra group consists of two species that are restricted to the Lake Maracaibo basin. Interestingly, these are the only two species of Farlowella found in the basin. F. mariaelanae Martin Salazar, 1964 is the only member of its species group and is found throughout the Orinoco drainage and in the Rios Meta and Guaviare in Colombia. From the Amazonian F. nattereri group, only F. odontotumulus Retzer and Page, 1996 is present in the southern most part of Venezuela. The majority of Venezuelan Farlowella belong to the F. acus group that is found throughout the Orinoco basin and in the coastal Rio Yaracuy drainage. The final species, F. oxyrryncha, is found throughout the Amazon drainage and in the Rio Cauru, upper Orinoco.

The river systems of Venezuela are fairly well defined. Traditionally, the country is divided into six drainages: Lake Maracaibo, the coastal drainages, Lake Valencia, Rio Orinoco, Rio Cuyuni (Guayana), and Rio Negro (Amazon). The largest coastal drainages are ecosystems in their own right and include the Rio Tocuyo, Rio Yaracuy, Rio Tuy, and Rio Unare systems. These coastal systems are largely unexplored and promise to produce many species previously unknown to science. *F. martini* Fernandez Yepez, 1972 is the only species described from a coastal drainage and is restricted to the Yaracuy system. Earlier this year, I encountered what appears to be a second coastal *Farlowella* species in the Rio Guare, a tributary of the upper Rio Tuy system. Sadly, I only collected two sub-adult specimens, but they appear to be an undescribed member of the *F. acus* group with a long thin rostrum similar to that of *F. vittata*.

Throughout Venezuela, *Farlowella* are referred to as "aguja" which means needle. This name may also be applied to some *Sturisoma*. Robust bodied loricariids are called "corroncho" or "panaque" and *Loricaria* and *Rineloricaria* are treated together as "paleta" or "tabla." A paleta is a small shovel or trowel and tabla means board. *Farlowella*, due to their very slender body, are one of the few loricarids not eaten.

Adult *Farlowella* species found in the Orinoco basin appear to be migratory, retreating to the largest rivers such as the Orinoco and Apure in the high dry season from February through April. Sampling of the Rios Guarico and Orituco, Guarico State and the Rios Santo Domingo and Tinaco, Cojedes State in April 2001 produced only juvenile *Farlowella* under eight centimeters. Whether this is a true migration or simply an ebb and flow with rising and falling water levels, I can not say for sure. Most large loricariids such as *Panaque nigrolineatus, Loricaria, Lamontichthys llanero*, and *Hypostomus* appear to also retreat to the largest rivers while adult *Hypoptopoma* and *Otocinclus* can be found at the same locations year round.

Aquarium books have traditionally applied the names F. acus, F. vittata, F. gracilis, and F. knerii to photographs of Farlowella. However, the vast majority of these identifications are incorrect. F. acus comes from a very restricted area near Lake Valencia and is F. gracilis appears to have a very endangered. restricted range within the Rio Caqueta, Colombia and F. knerii is known only from the upper Rios Napo and Pastazo where there is little to no commercial collection of aquarium fishes. Since most South American aquarium fishes are shipped from Manaus, Brazil and Iquitos, Peru, many of the Farlowella imported for the aquarium trade are Amazonian species. Most imported species are likely to be F. nattereri, F. oxyrryncha, and/ or F. platorynchus. F. amazona is also common throughout this area, but it is very distinct looking and I have never seen a photo of a Farlowella that resembles this species in hobby

literature nor seen them in the trade. *F. vittata* is a common llanos species and is imported for the aquarium hobby mainly from Colombia. After a careful review of *Farlowella* spawning articles in hobbyist publications that included photos, it appears that *F. vittata* is the *Farlowella* species most commonly spawned by aquarists.

Below is a list of *Farlowella* recorded from Venezuela with notes on each species. They are presented by species group and diagnostic characteristics are included that would be useful for identification in the field or of living aquarium specimens.

#### F. curtirostra Group

Diagnosis: 3 rows of abdominal scutes, snout short and blunt, males possess thickened odontodes along the side of the head (not on the snout).

#### F. curtirostra Myers, 1942

Holotype: Quebrada Tabor, Rio Motatan, Trujillo State. Found throughout the Maracaibo basin.

Diagnosis: Blunt snout and wide body in comparison to F. taphorni.

F. taphorni Retzer and Page, 1997

Holotype: Rio Muyapas, Merida State (not known from any other location)

Diagnosis: Snout longer and thinner than F. curtirostra.

#### F. mariaelenae Group

Diagnosis: 3 rows of abdominal scutes, short breeding odontodes cover the head of males, snout thin and short.



#### F. mariaelenae Martin Salazar, 1964

Holotype: Rio Salinas (tributary of Rio Pao Viejo), Cojedes State. Found throughout the Orinoco basin and in the Rios Meta and Guaviare, Colombia.

#### F. nattereri Group

Diagnosis: 3 rows of abdominal scutes, snout long and thin, breeding odontodes short in patches on the head.

F. odontotumulus Retzer and Page, 1997

Holotype: Caño Mavaquita near confluence with Rio Mavaca. Found throughout the Upper Orinoco, Amazonas State.



#### F. acus Group

Diagnosis: 2 rows of abdominal scutes, snout short and blunt (except F. vittata), breeding odontodes long on snout and head.

#### F. acus (Kner, 1853)

Holotype: Listed only as "Venezuela." Found in Lake Valencia drainages and Rio Torito, Carabobo State.

Notes: Retzer and Page found that F. acus could be divided into two populations. The population in the eastern and northern tributaries has different caudal fin markings from populations from the Rio Torito and southern drainages. This species is in grave danger of extinction. The city of Maracay has built an industrial park on the lake's eastern edge and the city of Valencia has built two industrial parks on the western edge. The northern and eastern drainages are now channeled ditches full of trash and industrial waste. I have only been able to find this fish in the upper reaches of the Rio Aragua, which is one of the very few unpolluted portions of the Valencia drainage.

F. martini Fernendez Yepez, 1972

Holotype: Rio Yaracuy. Found throughout the Rios Yaracuy and Aroa

F. venezuelensis Martin Salazar, 1964

Holotype: Rio Colorado, Guarapiche drainage, Monagas State. Found throughout the Upper Rio Guaripiche, Monagas State, northeastern Venezuela.

#### F. vittata Myers, 1942

Holotype: Tributary of the Rio Uribante, Tachira State. Found throughout the Orinoco Basin.



#### Notes:

Martin Salazar (1964) described four species which Retzer and Page place within F. vittata. These include F. angosturae, F. guaricensis, F. agustini, and F. roncalli. I have collected F. guaricensis throughout the Rio Guarico and F. agustini in the Rio Chirgua. In the wild, and in captivity, these two species are readily distinguishable. Specimens from the Rio Guarico are golden brown dorsally with very distinct caudal pigmentation while Rio Chirgua specimens are gray brown dorsally with less pronounced caudal pigmentation. F. augustini also inhabits a very different habitat than F. guaricensis. F. augustini is found over rocky substrates in fast flowing waters alongside Chaetostoma and Ancistrus. F. guaricensis is only found among vegetation and dead branches in slower sections of the Rio Guarico. In the aguarium, F. guaricensis remains on driftwood pieces, plants,



and the aquarium glass. F. augustini, in contrast, is extremely reophilic and rarely leaves the aquarium substrate. These two morphologically similar fish raise an interesting point in species definition. If two fish possess similar physical morphology, but are found in very different habitats and show markedly different behaviors, are they one or two species?

#### **Uncertain relations**

F. oxyrryncha (Kner, 1853)

Holotype: Rio Mamore, Rondonia State, Brazil. Found in the Rio Cauru, Upper Orinoco in Venezuela.

I would like to thank Mike Retzer, Illinois Natural History Survey, and Lee Finley for their helpful prepublication reviews of this article.

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## Will the real Corydoras bondi please stand up

#### **By Steven Grant**

I am sure that you are aware now that (some of) the fish that we in the hobby had given the name *Corydoras bondi* to has been identified by Isaäc Isbrücker (2000) as *Corydoras sipaliwini*. Because this work has been covered in Cat Chat before I will only give a summary of the facts.

In 1965 J. J. Hoedeman published a short description of Corydoras punctatus sipaliwini. In 1967 Nijssen & Isbrücker declared C. punctatus sipaliwini as a nomen nudum (an unavailable name that fails to comply with the relevant articles of the International Code of Zoological Nomenclature), but also that C. punctatus sipaliwini was the same fish as Corydoras bondi Gosline, 1940. This has remained the case until Dr. Isbrücker (2000) reconsidered the description of C. punctatus sipaliwini and in the light of recent similar cases and information, decided that Hoedeman's description did meet the relevant criteria of the ICZN, and that there were slight differences in pigmentation and meristics between bondi and sipaliwini, therefore making Hoedeman's species Corydoras sipaliwini Hoedeman, 1965. Dr. Isbrücker found Hoedeman's original specimens which came from Nickerie District, Sipaliwini River, Suriname, whereas C. bondi was described from the Río Yuruari, 3 km east of El Callao, Venezuela (although it is likely that the species are distributed in some way across Venezuela, Guyana, Suriname and French Guiana, according to Le Bail, Keith and Planquette, 2000).

Here is an excerpt from Gosline's original description of *bondi* (also see image of SU 35065 holotype of *bondi*):

"Ground colour yellowish. Sides with a median trilineate pattern formed of a central dark stripe bordered on either side by an unpigmented band, these in turn delimited by the brown spotting of the remainder of the body. Central stripe extending from the fourth scute to the caudal, becoming more intense posteriorly. All three bands about equal to the diameter of the eye in width. Head darker than body, with rather indefinite markings. Fins also without definite



35065. Copyright: California Academy of Sciences.

markings, except that there may be small spots on the central caudal rays of some specimens."

The fish shown in Seuß (1997) as *bondi* (reproduced here), matches *sipaliwini* exactly, so have we seen *bondi* in the hobby after all?

I feel that it is likely that we may have seen the true *bondi*, so until Dr. Isbrücker provides us with a positive identification of living *bondi* specimens, here is a line-up of some of the suspects:



15

car char Corydoras sp. 'common bondi'



Corydoras bondi 'common' Photo: Dave Speed

Origin unknown for all but Julian Dignall's specimen. This fish is similar to *coppenamensis* but is not as orange in base colour, and does not have the dorsolateral spots as distinct. It is also similar to *sipaliwini* but does not have the prominent bars in the



C. bondi 'common' Photo: Julian Dignall

caudal fin, and the dark vertical band in the dorsal fin is not as distinct as in *sipaliwini*. The specimen in Dave Speed's photo does appear to match Gosline's description of *bondi*, especially relating to the pigment on the caudal fin. The specimen photographed by Julian Dignall was caught and photographed by Julian in Venezuela. **Verdict**: Very likely to be the true *bondi*.





C. bondi 'common' female Photo: Ian Fuller

Corydoras sp. 'granti'



Corydoras sp. 'granti' Phote

Photo: Danny Blundell

Origin unknown. This fish appeared in the Northern Area Catfish Group Newsletter of May 1996, jokingly captioned as 'Corydoras granti', and also in All Corydoras Aqualog Supplement as *Corydoras* sp. aff. nattereri "GRANTI" S19441-4. It also likely that this is the same fish as S19440-4 of page 94 in All Corydoras. Its base colour and body pattern seem to match Gosline's description of *bondi* but the finnage pattern seems different. **Verdict**: Quite possible.

Corydoras coppenamensis Nijssen, 1970



From the Coppename River System, Saramacca, Suriname. This was originally described as a sub species of bondi but was later elevated to full species status (hence Gosline's species sometimes being called bondi bondi). Its dorsolateral pattern seems too bold and distinct to be bondi. It is thought to hybridise with other species in the wild (Nijssen, 1970). Verdict: Possible.

Corydoras sp. 'bondi trilineate'



C. 'bondi trilineate'

photo: unknown

Origin unknown. This fish has a white base colour and a very densely patterned body and finnage. Perhaps too much pattern on the finnage for bondi. Verdict: Possible.

Corydoras breei Isbrücker & Nijssen, 1992



Photo: Ken Kawamoto

From the Corantijn River System, Suriname. This species has a similar body shape to bondi, but the distinct trilineate pattern is not present in breei. Verdict: Possible to unlikely.



Corydoras nattereri Steindachner, 1876 (including

triseriatus & juquiaae)

Corydoras breei



From the Rio Parahyba, Rio de Janeiro; Rio Juquiá R., Poco Grande, State of São Paulo; and Rio Doce, Espírito Santo areas of Brazil. This species tends not to have the same dorsolateral body pattern as bondi. Verdict: Unlikely.

Corydoras prionotos Nijssen & Isbrücker, 1980



From Rio Doce system, Espírito Santo, Brazil. This species has a longer body profile than bondi. Verdict: Unlikely.

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Photo: Ian Fuller

Corydoras sp. 'Crystal Azure'



C. 'Crystal Azure' Photo: Ken Kawamoto

Originates from 'Brazil'. Possibly a young or variant of *prionotos*. Appears to have too long a body shape. **Verdict**: Unlikely.

#### Corydoras boesemani Nijssen & Isbrücker, 1967

From Brokopondo, Surinam. The pattern on this species is very bold in comparison to *bondi. C. boesemani* appears superficially very similar to *sipaliwini*. Verdict: Unlikely.

<u>Corydoras baderi</u> Geisler, 1969 (including <u>oelemariensis</u>)



From Pará, Brazil & Marowijne, Suriname. This species is devoid of pattern, other than the mid lateral stripe. Is found with and thought to hybridise with *sipaliwini* (Isbrücker, 2000). **Verdict**: Unlikely.

#### Corydoras sp. 'Peru Bondi' & 'Peru Bondi III'

These apparently un-described species from Peru, appear to have too high a body shape for *bondi*. They are more similar to *Corydoras acrensis* Nijssen, 1972. **Verdict**: Unlikely.



Corydoras sp. 'Peru Bondi' Photo: Ken Kawamoto



#### Corydoras sp. 'Purus Bondi'



Corydoras sp. 'Purus Bondi' Photo: Ken Kawamoto

This species which is being caught in the Rio Purus and Rio Acre in Brazil, appears to have a too high a body shape for *bondi*. It may represent a form of *C. acrensis*. **Verdict**: Unlikely.

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сат снат <u>Corydoras sp. 'Pricilla'</u>



This species is being caught in the Rio Madeira System, Brazil. The body shape appears too elongated for *bondi*. **Verdict**: Unlikely.

Corydoras sp. 'mazaruni'



Corydoras sp. 'mazaruni' Photo: Ken Kawamoto

Origin unknown. This does not have the ventrolateral body markings of *bondi*. This could be the young of *boesemani* or *sipaliwini*. **Verdict**: Unlikely.

#### Acknowledgements

Thank you to Dr. Isbrücker for the copy of his paper; Dr. William N. Eschmeyer for the description of *C. bondi*; Dave Catania of the California Academy of Sciences, for the permission to use the image of the holotype of *C. bondi*; Werner Seuß for permission to use the image of *C. sipaliwini*; Yutaka Yamamoto of "I Love Corydoras" and Ken Kawamoto of "Aqua Japan" for permission to use images from their websites; Danny Blundell, Ian Fuller, Dave Speed and Julian Dignall for permission to use their images.

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http://scotcat.com ("Scot Cat")

http://www.corydoras.pwp.blueyonder.co.uk/("Corycats")

# Catfish Study Group (UK)

# Sunday 17 November 2002

# **Autumn 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

# <u>Canteen</u>

# 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 <u>clear</u> 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.

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