IN THIS ISSUE

Chaca chaca
By
Alan Holmes

Corydoras melanotaenia
By
Mark Bryson

Catfish of Asia Part 2
By Shane Linder

Synodontis Galinae
By
Harro Hieronimus

Volume Number 1   Issue Number 2
June 2000
CONTENTS

1 Committee
2 From the Chair
3 Synodontis galinae
   by Harro Hieronimus
5 Catfish of Asia Part 2 (Revised)
   by Shane Linder.
9 Breeding Corydoras melanotaenia
   by Mark Bryson
12 Meet the Members - Ian Fuller
   Corydoras updates
13 Convention 2000 Report by Claire Dignall
   Catfish of WW1
17 Chaca chaca
   by Alan Holmes
19 Meet the Members — Dave Speed
   Poem — Cory Cats
20 Membership List

Dear Members

I would like to thank members for their excellent contributions to this issue. Please don't think that because some others are doing it, you don't have to.

With each issue of the Journal, one or two of you will receive a letter asking you for a small article for 'Meet the Members'. Not only is it interesting to know what members are up to, it fills a space in the Journal. I'm sure you don't just want a front and a back cover through the post. We would appreciate your help to keep the flow going.

Articles and pictures can be sent by e-mail direct to <bill@catfish.co.uk> or by post to Bill Hurst
18 Three Pools
Crossens
SOUTHPORT
PR9 8RA (England)

Tell your friends that if they want to join, there is a Membership Application Form on the 'net at <planetcatfish.com>, <scotcat.com> and <cfkc.demon.co.uk>.

Ed.

ACKNOWLEDGEMENTS

The photographs submitted with the Chaca Chaca article are by Erwin Schraml.
The photo of Hypancistrus zebra (Father and Son) is by courtesy of Ingo Seidel.
Front Cover: Designed by Kathy Jinkins. Printed by Chapter 4, Southport.
HONORARY COMMITTEE
FOR THE
CATFISH STUDY GROUP (UK)

PRESIDENT
Trevor (JT) Morris

LIBRARIAN AND
AUCTION ORGANISERS
Roy & Dave Barton

VICE PRESIDENT
Dr Peter Burgess
PJBurgess@compuserve.com

FUNCTIONS MANAGER
Trevor Morris

CHAIRMAN
Ian Fuller
i.fuller@virgin.net

SOCIAL SECRETARY
Terry Ward

VICE CHAIRMAN
Danny Blundell

WEB SITE MANAGERS
Julian Dignal jools@planetcatfish.com
Allan James Ukajames@cs.com

SECRETARY AND TREASURER
Bill Hurst
bhurst@catfish.co.uk

COMMITTEE MEMBERS
John Henderson, John Cowan
Peter Liptrot bolnathist@gn.apc.org
Steve Pritchard S.Pritchard@btinternet.com

VICE CHAIRMAN
Danny Blundell

CATERING DEPARTMENT
Mr & Mrs Morris and Mr & Mrs Ward

SECRETARY
Dave Speed
dspeed@cast88.freeserve.co.uk

EDITORIAL TEAM
Ann & Danny Blundell, Ian Fuller, Bill Hurst

MEMBERSHIP SECRETARY
Dave Speed
dspeed@cast88.freeserve.co.uk

DISTRIBUTION
Ann & Danny Blundell

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

SCIENTIFIC ADVISER
Isaac Isbrücker

ASSISTANT SHOW AND
TROPHY SECRETARY
Ann Blundell

CAT CHAT

The Committee would like to thank the following businesses for their financial support in the production of this journal

BARLOW'S AQUATIC TRADING
ACCRINGTON

BRITAIN’S AQUATIC SUPERSTORE LTD
BOLTON

PIER AQUATICS
WIGAN

MERMAID FISH IMPORTS
BROMSGROVE

GBW JOINERY
DARWEN

PRESTWOOD PETZONE
STOURBRIDGE
From the Chair

Hello everyone, I hope you all enjoyed the first issue of "Cat Chat". It was pretty hard going to get it ready on time but we made it. They tell me it only gets harder but if all of you contribute a little it should actually become easier. We did however have a slight hiccup with the printing of the information sheets but that problem has now been sorted. I formulate these information sheets and to make sure that the information on them is correct is something that I cannot achieve all on my own. I am appealing to you all again to help me with information on the fishes that you keep, especially any that you may be breeding. Once I have completed a dossier on a species, I can then build up a complete information sheet. Any photographs or breeding information submitted and used will be accredited to the photographer or breeder.

February: Hans-Georg Evers and Ingo Seidel, two eminent aquarists/authors from Germany were our speakers at our first Annual Convention. It just remains for us to repeat the success next year. More on the Convention inside this issue.

March: This was the first of the Group's biannual auctions. Attendance was high with very few seats left for latecomers. Altogether there were more than twenty lots, some of which contained a wide variety of items from rare/unusual Corydoras and Loricariidae to the humble Guppy. Our auctioneer on this occasion was Joan Davison. One item I feel needs a special mention and with it our warmest thanks, was a beautiful tank and cabinet made and donated by one of our members from Newcastle, Arthur Grogan.

April: The first of our group activity meetings, where members bring along a nominated species of catfish. This month it was Aspredinidae (Banjo's) and our Hon President, Trevor Morris, did us proud by bringing along a selection of his own fish to see and talk about. He gave us an in depth insight into their needs, explaining the individual requirements of each of the species on show, the best environment, water condition and feeding habits. When Trevor had completed his talk, I think we would all be confident in being able to keep these strange and wonderful looking catfishes in the best possible condition.

After a short break, Allan James, of 'Scot Cat' web site fame, was the speaker. With the aid of some excellent slides, he gave us an interesting account of the running of his fish house and the species of fishes that he keeps and breeds. It is always good to see how another fish house has been set up and the sort of equipment that is used.

May: The activity for this month was the 'Whiptails' section of the family Loricariidae, altogether there were twelve specimens displayed and it was very obvious why these fishes are so difficult to identify. There were four Rineloricaria beni, (Ingo Seidel had bred these in Germany and brought them when he came to talk at the Convention in February. They were then a little over one inch long (25 mm) but had now grown to about two and a half inches (65 mm) and were looking in really good shape). A trio of Rineloricaria latirostris, (1 x ♂ and 2 x ♀) and a pair of the so-called 'Red lizard' Rineloricaria sp. There were also the obligatory unidentified fish

The open discussion and a break for the customary 'Pie & Peas', was followed by a slide presentation of whiptails by member Danny Blundell. Slides were also provided by other members, including some showing us the true natural habitat of these fishes, in some cases from just two inches (50 mm) of water with up to three feet (1 metre) of mud and debris.

IF
Synodontis galinae
By
Harro Hieronimus
From "Aquarium" issue # 2, 1998, pp. 4-5

We received these interesting catfish by chance, they came together in a box with some specimens of Synodontis eupterus which had been caught in 1985 in the White Nile. At that time it were still subsadult fish, and the differences between the two species were not as striking. The only difference was that the S. galinae looked somewhat lighter than the other fish. But at that time we thought that this was the result of stress during the transport - the colours may change through that slightly.

But during the growth of both species the differences become more and more striking. The body of S. galinae was rather massive, but the head remained small and little more flat at the tip of mouth. The “sailfin” dorsal was not directed as directly to the top as in the other species and the last ray was somewhat longer and “looked” downward. The caudal fin shows the large serrations typical for the species. The pectoral fin muscles were very strong so that the catfish could hold against strong current.

A very special feature of this species - colouration. The purple body colour and the fins with dots in the colour “Bordeaux red” are typical.

Synodontis galinae Kochetov sp. nov. attain maturity with their 3rd year of life. The body length reaches from 9 to 15 cm and varies. The females are not as slender as the males, and the colouration of the males is much more intensive.

To produce offspring the fish were treated with hypophyse hormone suspension of the European catfish (Silurus glanis). Afterwards the eggs were fertilized with sperms with the so called “dry” method. The female was 14 cm long and produced 700 eggs. But only in 5% of the eggs fertilization had been successful. The egg development lasted 24 hours at a water temperature of 27°C. Starting at their third day of life the larvae started to feed on white mosquito larvae.

Normally the mature female is chased by several males through the aquarium. The reproduction can be stimulated with fresh, soft water and an increased temperature. The fry are active during the night, therefore the lighting must be not too strong, better very weak.

Adult fishes inhabit a certain territory and keep close to various hiding places like caves, grottos, tubes, etc. But they are absolutely peaceful to other fish species in the aquarium.

"With the mouth to the top", i.e. upside-down, the fish “migrate” rather rarely, generally only while searching for food. With the help of the swim-bladder the fish can produce rather loud sounds. With the help of the pectoral fins - additional crackling and squeaking. In nature these fish can produce weak electrical impulses which may be very useful in turbid water.

Translation from Russian to German: O. Grineva
Translation from German to English: H. Hieronimus

This text cannot produce any systematic impact and may only be used for exclusively private purposes. There is no guarantee that this translation is correct.

Editors Note: Since receiving this article from Harro, there have been a number of suggestions on the internet that this fish is in fact, Synodontis eupterus. No doubt the rumble in the jungle will continue until someone proves the right or the wrong of it.
BARLOWS AQUATIC TRADING

Now selling

RUTO FROZEN FISH FOOD

at

ridiculously cheap prices!

any mixed variety from

* Daphnia * Cyclops *
* Cichlid Mix * Tubifex *
* Vegi Diet * Discus Food *
* Brine shrimp * Bloodworm *
* Malawi Mix * Quintet Mix *
* Lance fish * Marine Mix *

25 Packs — £35.00
50 Packs — £65.00

This is the MAIL ORDER PRICE
and includes
NEXT DAY DELIVERY and VAT!

Have your Credit Card ready when you ring

01254 388815
The Catfishes of Asia
Family Bagridae part two

By R. Shane Linder <shane@planetcatfish.com>

In this article we continue our review of the family Bagridae. The first installment in the series covered the genera: Batasio, Chandramara, Rama, Pelteobagrus, and Hyalobagrus. This series is not meant to be a comprehensive review of the family Bagridae, but rather a general overview of the genera that are imported for the aquarium hobby with some frequency. The entire series has been updated for the new millennium.

Perhaps a better title for this piece would be "Beauties and Beasts." In this article we look at what are not only some of the most beautiful catfishes in the hobby, but also the hands-down meanest freshwater fishes known. The beauties belong to the genera Leiocassis, Pseudomystus, Bagrichthys and Horabagrus. The beasts are members of the genera Hemibagrus and Olyra.

In Mo's 1991 work he followed Jayaram's 1968 suggestion and divided the genus Leiocassis between Leiocassis and Pseudomystus. This division has been accepted most subsequent authors (Kottelat et al, 1993, Ng & Rachmatilta, 1999, Tan & Ng, 2000). That said, there are still some serious problems with this division. Mo, 1991 attempted to define Leiocassis as a Southeast Asian genus and stated that Chinese Leiocassis examined by him actually belonged to the north Asian genera Pelteobagrus or Pseudobagrus. Unfortunately, a few Russian and Chinese authors have recently placed some Russian and Chinese catfish in Leiocassis. This complicates the topic as now Leiocassis is composed of an inter-related group of Southeast Asian species and an inter-related group of north Asian species. However, these two groups, in the same genus, are distantly related to each other. Most of the species familiar to the aquarium hobby have now been placed in Pseudomystus.

The genus Pseudomystus still needs some serious attention. In the past it has been used to group together nearly all of the "bumble bee-patterned" catfishes of Southeast Asia. The hobby has done the same in that all of these fishes are sold under the name "bumble bee catfish" and nearly always labeled Pseudomystus siamensis even though there is more than just this one species imported. It is the same case with the Pseudomystus stenomus complex, which usually are found under the common name false bumblebee catfish.

The Pseudomystus bumblebee catfishes are all very beautiful. The body is a velvet black highlighted with bands of white or off-white. These catfishes are nocturnal, but with a little patience, they can be conditioned to accept food when the aquarium lights are on. It is a good idea to condition nocturnal catfishes to do this because it is often the only time that you will see them and be able to observe their health. Pseudomystus, like some doradids, have a way of disappearing in a tank only to be found months later when you decide to rearrange the tank.

Like many catfishes, it is imperative that they are fed properly and not left to live off of only what they can scrounge up in the aquarium. The hobbyist should also be aware that Pseudomystus are efficient predators and will consume fishes up to half of their size. If your tank is missing a couple of tetras or barbs, the bumblebee catfish is almost certainly your culprit. These fishes do well in a community setup, but each individual will need its own cave as they can be quite territorial amongst their own kind. Aggression is often displayed by biting another Pseudomystus' caudal fin. Damaged caudal-fins are a sure sign that there are not enough retreats for all of the fish to live comfortably together. All Pseudomystus can be sexed in the typical bagrid fashion and the males' genital papilla is even more distinct than in many other bagrids.

Both the bumblebees and false bumblebees can be found in creeks and rivers throughout Borneo, Thailand, Sumatra, Java, and Malay. Although they come from normally soft acidic waters they can easily adapt to almost any water conditions provided the extremes are avoided. There have been no recorded spawning successes, but I have come very close to inducing spawning on a number of occasions. The main keys are to separate the sexes, raise the temperature, and feed high protein foods. When the females are gravid simulate a monsoon season with large cool water changes and the addition of a great amount of aeration.

The genus Bagrichthys hails from Borneo, Sumatra, Cambodia, and Thailand. This genus is known to the hobby primarily because of the black lancer (B. macrocanthus). The genus presently contains six species (see table on page ??). B. macrocanthus, the only member of the genus imported, is truly one of the most beautiful fishes in our hobby. The fish is solid velvet
black with a white mid-axial streak that runs from the shoulder to the caudal peduncle. The entire caudal fin is a transparent white and develops flowing extensions with age. The lancer in "black lancer" refers to this fish’s disproportionately tall dorsal fin which, when folded down, reaches nearly to the caudal peduncle. These fish can be expected to reach an adult standard length of about eight to ten inches but is slow growing and will require a few years to reach this length.

The black lancer is, by nature, very nocturnal. Once again though, with some conditioning, the fish can be taught to eat with the lights on and even to feed from its owner's hand. If the fish is kept in a community type tank be sure that it receives an adequate diet. Wild specimens have been caught with worms on a hook and line. In the aquarium, bloodworms (chironomid larvae) are eagerly accepted. These fish are often territorial among their own kind, but as with most bagrids, aggression can be severely reduced by keeping one male with two or more females. Lancers are very adaptable to changes in pH and DH and will thrive as long as extremes are avoided. It has been suggested that raising the tank’s temperature above 80F for a couple of days helps lancers to cope with the stress of being moved. The sexes are easy to distinguish. Not only does the male possess a genital papilla, but the males’ nasal and maxillary barbels are more than twice as long as the females’.

The final beauties belong to Horabagrus. Mo's 1991 phylogenetic analysis concluded that Horabagrus is more closely related to the Asian schilbeids and thus Mo excluded this genus from Bagridae. While the general arrangement of this series has followed Mo's conclusions, I will deviate in the case of Horabagrus and follow Pethiyagoda and Kottelat (1994: 112) who state that until clearer evidence is available Horabagrus should be retained in Bagridae. Horabagrus contains just two species: H. brachysoma and H. nigricollaris. Both species are restricted to India and have only very recently become available as regular imports. H. brachysoma has been imported as the bullseye cat and imperial cat. The coloration is stunning and very reminiscent of Mystus bimaculatus. H. brachysoma is normally found in brackish estuaries but adapts readily to freshwater aquariums. This fish will reach at least 214 mm SL (8 ½ inches) and is an efficient predator. It is a fish with a lot of "personality" and, like many larger pimelodids and bagrids, soon becomes a true pet. H. nigricollaris comes from freshwater rivers and lakes. The coloration is very similar to H. brachysoma but the light shoulder markings wrap over the nape (neck) to form a white collar. H. nigricollaris remains a bit smaller at an adult length of just under seven inches.

Now that we have looked at the beauties, let's cover the beasts. Most of the larger "Mystus" catfishes were moved to the genus Hemibagrus by Mo in 1991. Two of these, the Asian red tail, Hemibagrus wyckioides and the crystal-eyed catfish, Hemibagrus wycki, are imported for the hobby with increasing frequency. Asian red tails used to be quite rare and expensive in our hobby. However, many Asian countries have recently begun serious aquaculture programs aimed at keeping their nation fed. The large Hemibagrus species have proven ideal for this and are now being farmed in many Asian nations. A byproduct has been that large numbers of young Hemibagrus are now showing up in the aquarium trade. Young Asian red tails in the two to three inch range are becoming a common sight in many pet stores. At this size, the fish's body is nearly black and the tail shows only red highlights. Against the black body, the long white barbels contrast nicely.

H. wyckioides will reach a maximum standard length of just over three feet (95 cm) (Ng & Rainboth, 1999: 569). It is not just their size that makes them beasts, but also their disposition. In nature, red tails over 12 inches are strictly predatory with other fishes accounting for nearly half of their diet. Crustaceans and insects make up most of the remaining half. Barbs, three spot gouramis, and even snakeheads (Channa spp.) are all eaten along with many other fishes. One red tail was even found with the remains of a snake in its stomach. In captivity, specimens over four inches will need their own tank as they will not tolerate tankmates. Captive care is simple, just provide clean water with a good flow from a power head. A couple of large PVC pipes and rounded rocks provide hiding places and complete the set up. Water chemistry is of little concern since these fishes often hunt from the soft acidic waters up-river down to the brackish deltas of the larger Asian rivers.

The crystal-eyed catfish, Hemibagrus wycki, is also quite striking. The entire fish is black with white markings on the caudal and dorsal fins. The eyes are a sky blue much like those of Panaque suttonorum. H. wycki is capable of attacking animals of its own size. Sands (1985: 129) claims that it is the "only freshwater fish clearly unafraid of man". In captivity they will reach just under two feet standard length. These fish have tremendous jaw strength. Layley reported that her specimen managed to bite, and nearly flatten, an aquarium heater protected by an aluminum sleeve (1995: 36). A proper set up for a crystal-eyed catfish should be similar to what has been recommended for Asian red tail catfishes. One major advantage that the Hemibagrus species have over the large South American catfishes is that they are less skittish in captivity.
The nasty disposition of the Hemibagrus species really cannot be over exaggerated. It has been my experience that a fairly small Hemibagrus will terrorize even larger aggressive catfishes. I have read accounts of smaller Hemibagrus destroying large predatory pimelodids in short order. I even met one aquarist that placed a 12-inch Hemibagrus wyckioides in a very large tank (over many THOUSAND gallons) with two two-foot channel catfish (Ictalurus punctatus). Even in this large tank both Channel catfish were killed on the first night with the Hemibagrus.

This same excessive aggressiveness is found in the members of the bagrid genus Olyra. Olyra has been considered for many years as the sole genus of the family Olyridae. However, Mo's 1991 phylogenetic analysis of the family showed that Olyra is a highly specialized member of Bagridae. Mo recognized Olyra as the sister group of the lineage comprising Bagrus, Aorichthys, Mystus, and Hemibagrus. These fish resemble small elongate Hemibagrus and are known as fighting catfish. In Asia Olyra are placed in small aquaria to battle against each other in much the same way as Betta. Money is bet on the outcome of the battle. Olyra have been imported on a few occasions, but the results are inevitably the same. Only one fish survives import per bag after the first night with the Olyra shipped with it.

This article would not be complete without mentioning the responsibility that a hobbyist incurs when they purchase one of these large predators. Give some serious thought to the long term care of these animals before you purchase one. Are you going to want to keep a 200 to 300 gallon aquarium with only one fish in it? Whether you prefer to keep the beauties or beasts, there is no doubt that this family has a lot to offer any aquarist. Next time we will explore the genus complex genus "Mystus".

Below are the valid species, as of April 2000 for the above genera with the exception of Hemibagrus, which is currently under revision by Ng Heok Hee at the National University of Singapore.

**Leiocassis** Bleeker, 1858

Leiocassis brashnikowi (Berg, 1907) China & Siberia: Amur, Oton, Ussuri, & Sungari Rivers & Lake Hanka
Leiocassis herzensteini (Berg, 1907) River Amur, River Oton, River Yalu
Leiocassis hirsutus Herre, 1934 China
Leiocassis micropogon (Bleeker, 1852) Sumatra, Borneo, Malaya
Leiocassis poecilocterus (Valenciennes, 1840) Borneo, Sumatra, Thailand, Java, & Burma
Leiocassis saravacensis Boulenger, 1893 Borneo
Leiocassis ussuriensis (Dybowski, 1872) China: Hunan, Tungling, Hu, Shan-si; Shanghai, Sulfu, Yachow, Korea; Russia: Amur, Ussuri, & Sungari Rivers, Khanka Lake

Notes: Jayaram 1958: 336 points out that reports of this species far south of its normal range, such as reports from Shanghai, may represent another species.

**Pseudomystus** Jayaram, 1968

Pseudomystus bicolor (Fowler, 1934) Thailand
Pseudomystus breviceps (Regan, 1913) North Sumatra
Pseudomystus flavipinnis Ng & Rachmatika, 1999 Borneo: Kapaus basin
Pseudomystus fuscus (Popta, 1904) Borneo, Sumatra, & Malaya

Pseudomystus inornatus (Boulenger, 1893) Borneo
Pseudomystus leiacanthus (Weber & Beaufort, 1912) Malaya: Lake Chin Chin, Johore, Kuta Tinggi, Malacca, Mawali, River Plus; Sumatra: Faloek, River Kuantum
Pseudomystus mahakamensis (Vaillant, 1902) Borneo and East Sumatra
Pseudomystus moeschii (Boulenger, 1890) Sumatra
Pseudomystus myersi (Roberts, 1989) Borneo
Pseudomystus robustus (Inger & Chin, 1959) Borneo: Kinabatangan River

Pseudomystus rugosus (Regan, 1913) Sumatra & Borneo
Pseudomystus simiensis (Regan, 1913) Thailand: River Bangpakong, River Chantabun, Menam Chao Phya, Doi Angka, Menam Khan, Meklong, Mewang, Menam Mun, River Nontaburi, Pak Jong, Menam Tadi, Menam Tapi, Trang; Cambodia, Laos

Pseudomystus stenomus (Valenciennes, 1840) Thailand, Cambodia, Java, Sumatra

Pseudomystus sp. undet Noted by Roberts, 1989 Borneo
Pseudomystus vaillanti (Regan, 1913) Borneo

Bagrichthys Bleeker, 1858

Bagrichthys hypselopterus (Bleeker, 1852) Borneo: River Kapaus, Sintang; Sumatra: Djambi, Palembang, River Musi, River Rokan
Bagrichthys macracanthus (Bleeker, 1854) Cambodia, Thailand, Sumatra, & Borneo
Bagrichthys macropterus (Bleeker, 1853) Cambodia, Thailand, Sumatra, & Borneo
Bagrichthys micranodus Roberts, 1989 Borneo
Bagrichthys obscursus Ng, 2000 Indochina
Bagrichthys vaillanti (Popta, 1906) Borneo: Mahakam River drainage

Horabagrus Jayaram, 1955

Horabagrus brachysoma (Gunther, 1864) Southern India in estuaries
Horabagrus nigricollaris Pethiyagoda & Kottelat, 1994 Southern India

Olyra McClelland, 1842

Olyra burmanica Day, 1872 Burma: Pegu Yomas
Olyra horae (Prahad & Muderji, 1929) Burma: Indawgyi Lake & India: Menghayala State
Olyra kempi Chaudhuri, 1912 India: Assam
Olyra longicaudata McClelland, 1842 India: Assam
References


Khan M. S. et al. "Food and Feeding Biology of a Tropical Freshwater Catfish, Mystus nemurus C. & V. With Reference to its Functional Morphology" (My copy of this paper is a photocopy lacking appropriate citation information)


Forthcoming Meetings

16 July Pimelodidae
   Table Show, Slides, Speaker
13 Aug Mochidae
   Table show, Slides, Speaker
10 Sep Annual Open Show
   Aspull Civic Hall, Aspull Wigan.
   (on the B5238)
   Doors open: 1000
   Judging: 1300
   Benching: 1030

   Auction
   Lots may be pre-booked by telephone
   (01942 248130)
   Booking in from 1030
   Auction starts 1230

Don't forget your

ANNUAL AUTUMN AUCTION

19 NOVEMBER 2000
At
St Elizabeth's Parish Hall
Bolton Road
Aspull
Wigan

Doors Open 1000 hrs
Lots may be pre-booked by 'phone
(01942 248130)
Booking in from 1100 hrs on the day.
Auction starts 1300 hrs prompt
All day Canteen
Breeding

Corydoras melanotaenia

By

Mark Bryson

First described by Regan in 1912, Corydoras melanotaenia originates from Rio Manacacias, a tributary of the Rio Meta and from various other locations, in Colombia. Body colour is bronze with a yellowish sheen. What catches your eye are the clean fins with bright golden/orange colouration. This colour is more pronounced when the fish are in good condition or ready for breeding.

I bought the fish on 6th March 1999, on one of our club raiding trips south of the border, at Huddersfield Aquatics. This is an excellent outlet that caters mainly for wild caught cichlids and catfish species. I purchased four male (3.5 cm) and two female melanotaenia, approximately 5 cm body size for what I thought was a bargain at £2.50 each.

I returned home and set them up in a 45 cm x 30 cm x 30 cm quarantine tank. Temperature 22c pH 6.5. Filtration was by air operated Bio 45 sponge and a corner box filled with ceramic pipes and crushed coral (this prevents the pH from dropping too low). The tank included a small glass trough filled with fine sand and was planted heavily with Java fern. Java moss was weighed down and placed on top of a piece of slate (10 cm x 15 cm). On the slate I had attached small feet which allowed the fish a hiding place and some security as I found them to be very skittish.

The fish were fed at least twice daily on a mixed diet of live white worm, grindal worm, Tetra Prima & Tetra Tabi Min.

The fish were kept in these conditions, until the 4th July 1999, when I re-located their tank to a higher position in the fish hut, which automatically increased the temperature by two degrees because of the space heating. I let things settle down for three weeks and then decided to have a go at getting them to breed. (It's the same old story of when you talk to other aquarists who say they have bred Corydoras melanotaenia years and years ago without any problems but they never really enlighten you as to how they did it).

I was did my weekly 25% water changes to all my tanks but I carried out a 40% change to the melanotaenia tank using water straight from the domestic supply pH 8.3, temperature below 16C. Fortunately this had no adverse effect on the fish. Quite the reverse because 72 hours later (29th July) they spawned. The water parameters at time of spawning were Temp 20c, pH 6.9.
Spawning

Day 1.
The first eggs I found were when I went out to the fish hut to feed the fish at 6.30 pm. Eggs are ivory in colour and measure 1.5 mm. These had been placed at two different sites within the tank.

Site 1 was on the front glass about 3 cm from the water surface approximately 150 placed in a group 3 cm in diameter with the eggs on top of each other in the same manner that Corydoras barbatus lay their eggs.

Site 2 had double the quantity of eggs, the only difference being that some of the eggs were caught up in some Java moss and only 10 cm from the bottom of the tank.

For the purpose of this experiment I divided the eggs into three separate show tanks with water from the breeding tank. An airline was added with slow turnover to give slight water movement and treated as follows:

Site 1 spawning (surface) small amount of methylene blue was added and then removed after 30 minutes by a 95% water change using water from the breeding tank.

Site 2 spawning (bottom) I divided into two separate tanks and labelled them Site 2 and 3.

Site 2 eggs were left as they were with nothing added to the water.

Site 3 methylene blue was added and left for 12 hours and then a 95% water change was done the following morning using water from the breeding tank.

Day 2.

All eggs had now changed colour to light tan, some were eyeing-up. Only six eggs fungused in all of the show tanks. These were removed.

Day 3.

10 am. I carried out a water change to all three tanks after I removed a total of six white fungused eggs.

Day 4.

90% water change was carried out in all small tanks. Again I removed a couple of bad eggs. By the evening most of the eggs had hatched.

Day 5.

I carried out water changes to all tanks and removed any shells or dead fry. The fry from lot 2 had started to die off and this had a knock on effect. By the time I returned later in the afternoon, all fry from lot 2 were dead.

Day 6.

Still keeping lots 1 and 3 separate, I transferred the fry into larger tanks (20 cm x 12 cm x 12 cm) with a Bio-foam 45 sponge filter added. Feeding started with micro worm. Prior to each feeding a 50% water change was done using water from the main breeding tank.

Day 7.

All fry were looking well and feeding now was alternated between micro worm and newly hatched brine shrimp. I ensured that a 50% water change was carried out prior to each feeding.

Day 10.

I transferred the fry to 30 cm x 20 cm x 20 cm tanks and they were fed as much brine shrimp as they could eat with a few feedings of grindal worm. Water changes were increased accordingly.

Day 14.

All fry were moved into the same tank (45 cm x 45 cm x 30 cm). I stopped feeding brine shrimp and concentrated on feeding grindal worms, Tetra Prima and Tetra Tabi Min. The fry were now beginning to look like the adults, the only difference being the fins had not coloured up.

Day 30.

All fry were moved to 1015 cm x 45 cm x 30 cm tank. Trickle filter filled with ceramic pipes and crushed coral powered by Fluval 4 internal filter. It is a very rewarding sight to watch up to 300 Corydoras fry moving about the bottom of the tank on the lookout for food.

Summary.

I normally like to keep eggs and fry with the parent fish. I believe fry grow faster in that environment. On this occasion I was quite glad that I did remove most of the eggs because I have never seen a single fry in the parent's tank. I know I didn't manage to remove all the eggs at the beginning therefore, from my experience with C. melanotaenia, I have observed that they are egg and/or fry eaters.

As to the experiment with methylene blue, I'm not too sure what to do about that for the best. I think I'll stick to the method of breeding corys that I have used quite successfully for the last few years, only changing things if the fish are a new species to me. If I do happen to get them to spawn, I normally remove most of the eggs and hatch them in the manner which I have written about, until I know the adults are not going to eat the eggs or fry.

©Mark Bryson can be contacted by e-mail <mark.bryson@bigwig.net>

This article was written for Paisley & District Aquarist Society, Catfish Study Group UK (formerly The Northern Area Catfish Group) and Allan James' website 'ScotCat'.
All of the usual species and some rarer examples too

The Midlands top aquatic centre!

Tropical fish

With 20 years experience, we can not only provide you with everything you need, we can give help and advice on most aspects of keeping fish.

Over 200 tanks, well stocked with top quality freshwater tropical varieties.

Wolverhampton Road (A449), Prestwood, Stourbridge, West Midlands DY7 5AF

Visit our website for further details:
www.pet-zone.co.uk

Tel: (01384) 877150 & 877757
Fax: (01384) 877101

Opening Times: Mon - Fri 9am - 6pm, Sat, Sun & Bank Holidays 10am - 5pm
Corydoras

New species Corydoras spectabilis (Knaack, 1999). (Looks very much like Corydoras haraldschultzi but with a large black caudal peduncle blotch).

Corydoras bondi bondi is now Corydoras sipaliwini (Hoedeman, 1965)

Corydoras bondi (Gosline, 1940) remains but this fish comes from Venezuela

Corydoras coppenamensis (Nijssen, 1970) is raised to full species status from

Corydoras cortesi ( Castro, 1987) is a synonym of Corydoras septentrionalis.

Corydoras blochi (Nijssen, 1971) is raised to full species status.

Corydoras vittatus (Nijssen, 1971) is raised to full species status.

Corydoras pastazensis orcesi (Weitzman & Nijssen, 1970) is now the same as Corydoras pastazensis (Weitzman, 1963)
February 2000 saw the first Convention for the Catfish Study Group, however, it is the second year running that there has been a Catfish convention at the Lowton Civic Centre, Lowton, near Wigan, Lancashire and it's easy to see why. The site affords the space needed for trade stands and displays, audio-visual equipment for the guest speakers and seating for both listening and eating in comfort. There was a small but impressive selection of fish on sale that day, responsible in fact for some rival buying amongst friends present. The Civic Centre is an ideal venue and the saintly ladies in the kitchen were even able to keep appetites at bay with welcome cups of steaming tea and their celebrated pie and peas served virtually all day.

Ingo Seidel and Hans-Georg Evers had flown from Germany to speak at the Convention, beginning the new Millennium with some imported knowledge and fresh insights. It was here that my husband Julian, (AKA Jools of www.planetcatfish.com), and I, were to meet Ingo and Hans, finally putting faces to some weeks of e-mail correspondence. Both Jools and I admitted that, judging by their substantial achievements to date, we'd been expecting people far older. Somewhat humbled, I don't think we were the only ones inwardly resolving to 'get the finger out'.

At the CSG (UK) Convention 2000, Hans was first to take the podium and guide us, with stunning photography, through a selection of catfish and their habitats of Brazil, drawing heavily on his own, first hand experience of catching these fish in the wild. He was able to describe a broad spectrum of fishes and their various habitats from the newly described Aspidoras of the Upper Xingu, through to the Rio Negro and south east Brazil explaining how their origin affects the needs of each species in captivity. His insights into breeding behaviours and problems of nomenclature all came with the clear sightedness of one who has held those very fish in his hands, netted in home waters.

On his first visit to the UK, for the Convention, Ingo's talk was on the subject matter of Loricariids, the focus being primarily on the sub-family ancistrinae. This took the form of a structured exploration of physiological
Hans-Georg Evers

Hans-Georg Evers is 36 and works in the Logistics Department of a trading company in Hamburg. At home, he has a fish room of some 15 square metres, housing 30 aquaria, which, in his self-deprecatory words, is "not many fish at all". He keeps fish since he was 11 years of age, and reminisces about the defining moment of that development. When Hans first saw a picture of Corydoras adolfoi in TFH, he knew he had to have it. He did so, and even now, his affection for this particular species is apparent. His later talk dwells, fascinated, on the problems of distinction between it and the imitators of the Rio Negro. He has specific interest in Corydoras and L-numbers, and one of his main aims is to spend much more time on the study of mouth breeding Loricariids. So far, Hans has successfully bred upwards of 200 species and confesses that he purchases fish only to breed - he keeps no fish simply for pleasure.

Hans is an accomplished author, and has put his name to more than 300 articles in the States, Japan and Germany. His three books to date are on Corydoras, Community tank husbandry and Piscine Biology. He has collaborated on many more and is a prolific photographer.

How did lngo and Hans meet?

"I was giving a lecture on Loricariids in Hamburg," Hans explains, "and only four people turned up. lngo was one of them! lngo visited me one week later, and as I was in the midst of my Cory book I was able to pass him all my information and pictures on Loricariids in the meantime. That was back in 1990, and we have been working together since."

A favourite specimen?

Both swiftly agree: "FurcODontichthys novaesi. Its totally different from anything you will ever find. It's a great fish but ugly - you'll see it later when we speak."

Ingo Seidel

Ingo Seidel is 33 and is a software developer for an electronics company in Bremen, Germany. He has successfully spawned some 70 species of Loricariids and about 35 Corys, a number confessed with the same humility as he apologises for his (excellent) English. He maintains about 60 aquaria in a cellar at home. These range in size from small tanks to 450 litres capacity: In his words,"I don't have anything really big." With 60 tanks to care for, lngo relies much on automation. He has to, with a 9 to 5 job, writing to do, photos to take, fish to tend and a private life to fit in somewhere else. He speaks fondly of his first excursions into fishkeeping. "I was 13 years old, and my first fish were guppies. Then in 1982 I saw a spawning report on Corydoras panda in DATZ. That was the turning point for me - I had to have that fish. It cost 50 marks, and I was still a schoolboy. It took me two years of saving my pocket money, before I went out and bought it my parents didn't know a thing. My first catfish was Corydoras davidsandsi, which I managed to spawn when I was still 18 years old. That too was a very expensive fish for me to buy at that time of my life, having just left school, but I managed it."
The most significant event of your career?

"Definitely spawning the Zebra pleco. My first successful spawning of this species was an extremely important moment for me. That was in 1996. Also, spawning the lipbrooders Loricaria similima and Pseudohemiodon laticeps."

Where have your interests taken you?

Ingo counts the visits: "Venezuela, Peru, Brazil, Bolivia... Brazil was definitely my favourite location. The Central Amazon has the most interesting Loricariids to be found anywhere. There, and in the Upper Negro, you can find really colourful fish - the stuff there is amazing.

How much of the year is dedicated to travel?

"I travel once every year to South America for three weeks. On top of that, I do maybe 20 to 25 lectures a year. These are in places like Switzerland, Norway, and Copenhagen... This is my first time in the UK. I am constantly amazed by the progress each country is making. It has been great to come over, because we never hear anything about the achievements of aquarists in the UK, so I've been totally surprised by the great work that is going on here. It is a pity that there is such poor communication between the two countries, and so little exchange of skills and ideas. Perhaps now, we can change that."

Catfish Atlas

Ingo Seidel and Hans-Georg Evars are the co-authors of a new Catfish Atlas, the first of three volumes. I asked Hans how they manage to work together as authors? "We telephone each other several times a week, and email for the remainder of that time. We are 130 km apart - not too far if we really have to spend some time working together on a piece." The Aquarium Atlas was begun 4 years ago; the partnership confesses meekly to being two years behind schedule, but Ingo is vehement: "Publication in 2001; definitely!" This is no small authorial feat, as the first volume alone runs to some 1200 pages and pictures. Sounds impressive, but what will be the benefits for the aquarist? "This will be a vital resource," explains Hans, "offering exhaustive information on the identification of and breeding behaviour of fish."

A telling measure of the detail found within its covers is that both writers have more than 15 years' experience of keeping Loricariids, and have a near endless list of contacts world-wide. Importers, right from Germany and the Netherlands to "darkest Peru" are in frequent communication. Contributors like Lee Finley from the US also add their vast experience of South America, as well as contributing pictures. Scientists provide exclusive pictures and data on those fish whose habitats are inaccessible, such as those to be found on Table Mountain in Venezuela. The book has pictures and insights into fish that no one else has. I ask Hans about the publishing environment in Germany and the titles available to the serious aquarist and writer.

"We have 6 magazines each with a circulation of around 10 to 12,000. Two of these are monthly and the rest are either bi-monthly or quarterly." The opportunities for quality writing and the dissemination of information are many. Hans adds "These magazines all carry excellent pictures, and are constantly on the lookout for more, they are always pestering me for photos."
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
one of the North West's Premier Angling Centres.

BRITAINS AQUATIC SUPERSTORE LTD
225 FOLDS ROAD
BOLTON
BL1 2TW

Tel: (01204) 534343 * Fax: (01204) 364174
Email: Info@britains-aquatic.co.uk
Web site: www.britains-aquatic.co.uk
THE FROGMOUTH CATFISH

*Chaca chaca*

(Hamilton 1822)

By

Alan Holmes

*Chaca chaca*: Common name the frogmouth catfish, originate from Borneo, Burma, Sumatra and the Ganges-Brahmaputra drainage of India and Bangladesh. It was first discovered in 1822 by Hamilton, and then introduced in about 1938. The family of Chacidae consists of only one genus, that of Chaca, and of this three species belong to the Chaca genus, *Chaca bankanensis*, Bleeker 1852; *Chaca burmensis*, Brown and Ferraris 1988, and , as already mentioned, *Chaca chaca*, Hamilton 1822.

The base colour of the Chaca is a light to dark brown mottled in places along the entire length of the body, whereas the underbelly has a reddish/brown tinge. The fins are similarly coloured to the general body colour, dorsal and pectoral fins are small whereas the ventral fins are large fan like fins. The eyes are very small whereas the ventral fins are large fan like fins. The eyes are very small, and almost appear to be on stalk like protuberances. I am still a little uncertain as to whether they have good eyesight, as they appear to ignore foods offered in front of them and yet, at other times will snap something up in the blink of an eye.

The pectoral and dorsal fin spines on Chaca’s are stated as short and sharp enough to inflict serious damage. In the wild, *Chaca chaca* bury themselves in the mud, it is not uncommon for fishermen to receive wounds from stepping on them, there is, however, no reports of venom in the spines. The Chaca has four short widely spaced barbels at the corners of its mouth and under its chin. The lateral line also appears to be very prominent and stands out from the body.

The sexual differences are still a little uncertain for the Chaca but they have been bred in captivity. One amusing footnote I read somewhere was that the fish is "sometimes predaceous and not suitable for a community aquarium" – well what a surprise!

This nocturnal species is supposed to only be active when feeding, this I have found to be so sometimes incorrect. As the Chaca that I have can be quite active during the day, this may be moving from one position to another and generally moving around the tank, but it is not totally inactive all day. It has a preference to bury itself beneath the gravel and sometimes the only way you can see where it is, is by the movement of the gravel on its gill covers.

Some species of fish that are quite small to medium sized are at risk from the Chaca whilst they rest and this I can well imagine to be true. The Chaca forages around the tank on a night, and will no doubt tackle fish this size, and larger when they are hungry.

Water conditions are about standard, they appear to have no special requirements, they are reputed to tolerate variances from pH 6 to pH 8, so there is a fair amount of tolerance from acidic to alkaline (though not in one go). Hardness is listed as 40 to 250 dGH? Various places of refuge are required, such as outcrops of slate or rock, large halved plant pots or clay pipes. Plants will not be damaged, but I have already noticed they have a preference to bury themselves, so any plants that get in the way are uprooted and usually end up as floating plants, unless potted and well covered with a layer of gravel.
There is a difference of opinion as to whether the Chaca uses it's barbels in a similar technique to that of the Marine Angler Fish, in that they use their maxillary barbels around their mouth parts to resemble worms, or some other aquatic delicacy and entice unsuspecting fish near them. Once within reach they suck in the surrounding water into the cavernous mouth they possess, and goodbye fish, hello lunch. Another train of thought is that they wait in ambush and attack without the use of any barbels. As for my opinion, I remain neutral, only the Chaca's or their victims can tell us the answer to that question!

The Chaca chaca that I now possess are 17 cm (6 3/4 in) in length, and at the broadest point across it's head it measures 6.5 cm (2 1/2in). The smaller of the two is 12.5 cm (5in) in length and approximately 5 cm (2 in) across the head. These share accommodation with eight *Erpetoichthys calabaricus* (reedfish), all without any problems so far! The two species will be separated soon as the reedfish will be going into larger quarters with, hopefully, another 12 reedfish, and the Chaca's will be kept with a few more of their own kind, should any make an appearance in the shops.

The water temperature is 78f (26c) and is at pH 6.9. The substrate is mainly small pea gravel with a light mix of bird sand with the cockle shell sifted out, otherwise the cockle shell can buffer the water to a slightly more alkaline level.

Places of refuge are supplied by mopani wood and halved clay pots, there is also a crocus clay plant pot that the reedfish mainly reside in. Plants are a selection of cryptocorynes, large vallisneria and Java fern.

Chaca's live on a diet of crustaceans, fish, earthworms and just about anything foolish enough to get too close to that cavernous mouth. At present the Chaca's I keep are feeding on large earthworms, and tablet food, chopped mackerel; sprats and trout; crickets; mealworms and waxworms. The earthworm cultures I keep for feeding the fish are fed on a variety of tropical flake foods, so I have no problem with the nutritional intake, and the crickets are fed an additional nutrient and vitamin diet of the gecko's so everything is well gut loaded.

I have also observed on a several occasion's that Chaca's do consume algae wafers, they take these with great relish, possibly the mixture of algae and fishmeal appeal to the fish, either way, they are consumed as soon as they are detected. It also backs up the theory by other people who believe that the Chaca's may also graze or consume algae. Whichever theory anyone believes, I can vouch for the fact that Chaca's appreciate algae in their diets.

They do have a tendency to sit in one position for long periods of time and then move onto somewhere else. They also swim in the middle reaches of the aquarium every now and again, and sometimes have a preference for resting on the side of the glass between the plants. As previously mentioned, they spend a good deal of time buried under the gravel, so tank maintenance and gravel siphoning should be done with a little extra caution.

As I have not experienced any problems with the Chaca's, I will keep my eye out for more. Hopefully, I may get the conditions as they prefer for breeding, if so, and I manage to keep a good record of the conditions, I will let you know the water parameters and any other influences I think important.

Alan Holmes 12.12.99

References


Roberts, T.R. A Revision of the South and Southeast Asian Angler-Catfish (Chacidae) (No other details)


All Photographs in this article are by kind permission of Erwin Schraml
MEET THE MEMBERS

Dave Speed
The Membership Secretary of the Catfish Study Group (UK)

I have kept fish since I was of 10 years old, that is more years than I care to admit to. I am married to Lois and anyone who knows me, will also know her. We joined the Northern Area Catfish Group, as it was then, at the British Aquatic Festival in 1995. We live in Broughton, North Wales, which became known as the 2nd Bermuda triangle because initially, all correspondence from the club went astray! (some people will say nothing changes). I took over the post of Membership Secretary for the NACG, from Trevor (JT) Morris, who was temporarily doing the job, in late July 1999. I was duly voted into the same role for the Catfish Study Group for the year 2000. My main interest has drifted towards “showing” fish. I am currently running 15 tanks ranging from a standard 24 x 12 x 12 up to my furnished tank, which resides in our dining room and measures 96 x 22 x 18. My predominant species are Loricariidae (known as L numbers to a lot of people) and Corydoras. Both species “perform” quite well on the show bench because they do not move very much! That's enough about me, I look forward to meeting many of the people whose applications I have processed during the course of the year.

Regards to all.

Dave Speed

In honour of my favourite fish -- The Coryadorables

Cory Cats
by Fryguy
www.tomgriffin.com

Tiny little whiskers,
on a podgy face,
so restlessly exploring,
each and every place.

Sifting sand and sniffing rocks
constantly inquiring --
"Is there some treat for me to eat?"
A morsel I’m desiring!

Another lap around the tank,
to rummage through your lair,
and then a dash straight up above,
to grab a gulp of air.

Armoured plates defend your flank,
and camouflage does hide you,
but still more easily you rest,
with several friends beside you.

Each time I have you figured out,
and all I have discovered,
another one unknown to me,
is suddenly uncovered.

So many shapes and sizes,
Stubby, short or squat,
and coloured as the rainbow,
with stripe or bar or spot.

Your legendary cuteness,
no other fish can boast,
and to your personality
I raise a well earned toast.

I gaze upon your dwelling place;
Of all the fish I see --
Tis you and you alone I find,
that means the most to me.
Dear Members,

Advice and Information

It is the intention of the Catfish Study Group (UK) to publish a list of all members in Cat Chat, in September 2000. The list will include full details of your name, address, postal code and telephone number and/or e-mail address as shown on your Membership Application Form. This list is intended purely for the purpose of members being able to contact each other in the furtherance of the hobby.

I would like to point out that although the Committee does not pass the addresses to any outside agency, we cannot guarantee the protection of this information once it has been published in the Journal.

I therefore ask any members who do not wish their details to be published, other than their membership number and name, to contact the Secretary, or Membership Secretary, before the next Cat Chat is published in September 2000.

Secretary
Bill Hurst
18 Three Pools
Crossens
SOUTHPORT
PR9 8RA
Tel: 01704 213690
<bill@catfish.co.uk>

Membership Secretary
Dave Speed
7 Oakdale Close
BROUGHTON
Near Chester
CH4 0PA
Tel: 01244 534060
<dspeed@cast88.freeserve.co.uk>

Any member found to be misusing the Membership List will be considered to have infringed the Catfish Study Group (UK) Rules by "causing offence to other Members".

Rule 9

"The Committee shall have the right to discontinue the Membership of any Member who behaves in such a manner as to bring the name and/or Membership of the CSG into disrepute, or who causes offence to other Members".
G.B.W
Products & Services

High class joinery
Cabinets  Furniture
Wood carvings
COMMISSIONS UNDERTAKEN

Write to: Brian Walsh
9 Marsh Terrace
Darwen
Lancs
BB3 0HF

Phone: (01254) 776567
Mobile: 07977 428 788
Email: g.b.w@brianwalsh1.freeserve.co.uk
DRAPER POND PUMP 15% DISCOUNT WITH THIS ADVERT (NOT AVAILABLE OFF ALREADY DISCOUNTED STOCK)

FROZEN FOOD
£1.95 PER PACK
4 FOR £7.00
12 FOR £19.50 (BLITTER PACK)

NEW COLDWATER SECTION

1600 G.P.H
£49.95

CLUB MEMBERS ONLY

NOW OPEN

FRIENDLY STAFF
READY TO ASSIST

EVERYTHING NEEDED BY THE DISCERNING AQUARIST
MAIL ORDERS TAKEN

MERMAID COMPUTER SYSTEMS

COMPLETE SYSTEMS MANUFACTURED TO SUIT INDIVIDUAL REQUIREMENTS
FROM £450.00 +VAT

SPARES AVAILABLE FOR DIY PROJECTS

DISCOUNT EPSON PRINTER CARTRIDGES

SCANNERS FROM £45.95
MODEMS FROM £19.95
(SUPPLY ONLY)

MERMAID SYSTEMS LTD
20 THE STRAND
BROMSGROVE, WORCS.
B61 8AB
TEL 01527 570072 FAX 01527 833601