

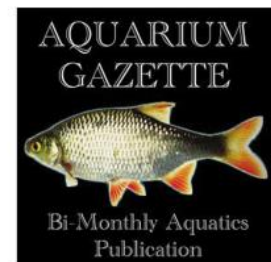
Journal of the Catfish Study Group



December 2020

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In this edition: *Rita* catfishes; Breeding *Corydoras* CW006; Breeding *Trachelyopterichthys taeniatus*.



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Cover image: *Rita gogra*. Photo: Beta Mahatvaraj

Convention 2020 logo – *Hara mesembrina* original artwork by Coral Vane Wright, courtesy of Catfishes of the World





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Chairman's Report - Mark Walters

Another year draws to a close, but by no means a usual year. We couldn't get to meet each other as much as we would have liked, with the cancellation of events from March onwards and into 2021. Of course, there have been far greater priorities than the continuation of our social lives and the impact that Covid has had on so many communities, individuals and their friends and families is our main consideration as we reflect on 2020. Although the news of vaccines provides some hope for a return to normal, the reality is likely to be continued restrictions on our lives for many months to come. The CSG Committee will keep reviewing our ability to return to our usual events in a safe and responsible way.

Judging by the volume of posts on our social media outlet, CSG members are keeping themselves busy with their fishkeeping with lots of reports of breeding successes. Don't forget to provide Steve with a few images and reports of your breeding to include in future Journals. I was pleased to find a spawning from my *Hypancistrus* L070 'zombie' plecos a few weeks ago, coincidentally likely spawned around Halloween! The fry are doing fine, along with new spawnings from *Peckoltia* L076, *Hypancistrus zebra* and *Corydoras venezuelanus* – a new species spawning for me after I picked up a group from Mike King at this year's CSG Convention, one of the few events we did manage to conduct this year.

We announced in the last Journal the cancellation of the 2021 Convention and remains too soon to know if the February auction can be carried out, but as things stand it is not likely. If the situation does improve and people can be guaranteed to be safe then we will resume our activities as soon as is possible.

Please note that we will hold the usual annual general meeting (AGM) on the 17th January 2021. The AGM will be held as usual from 1pm GMT and will be via phone conference. The message will also be communicated to members via email.

If you wish to join the AGM, please contact me directly by the 10th January so I can arrange a suitable sized media to manage the meeting (e.g., webex, zoom, MS Teams, conference call etc). Obviously, there is no provision for face-to-face meeting under the current conditions. There are no proposals to vote on this year and there have been no changes in committee personnel since the last AGM. With uncertainty surrounding the ability to conduct meetings in the future, there is no significant planning process to discuss. The formal agenda is as follows:

1. Welcome
2. Accept minutes from 2020 AGM
3. Committee reports
4. Any other business
5. Close

Thanks to Steve for another great Journal and on behalf of all of the Committee have a peaceful Christmas and a Happy New Year.

Mark

Editorial

Thank you to all the contributors to this issue, but also over the course of 2020. Please send any articles or outlines of an article to editor@catfishstudygroup.org. I can help with pulling the words together if need be.

The controversial issue of breeding the colour and fin morphs of the Common *Ancistrus* is covered in this Issue by our Chairman. These forms, particularly the longfin ones can illicit contrasting opinions from catfish keepers. There are keepers who think that only natural or 'true' forms should be kept and bred, and there are others who are fascinated by the varying colours and shapes.

Steve Grant

Breeding *Corydoras* CW006 (Callichthyidae) Michael Petersson



Corydoras CW006 pair. Female left, male right (Steve Grant. Fish at Pier Aquatics, Wigan)

It was the 9 April 2020, having slept quite through most of the day, I headed over and down the stairs to the basement, where we've got approximately 75 tanks housing mainly *Corydoras* catfish.

The first tank getting down the stairs straight ahead is a custom-made aquarium, ordered in my youth at around the age of 12-13 years old together with my father. First tank to undergo the daily search for eggs and to my surprise there were a large number of eggs, placed in a way that made me cautiously happy that it could be the only species in the tank that I hadn't bred before.

The tank measures 150cm L x 80cm W x 45cm H, with a volume of 540L. At first it was made a dense planted south American biotope aquarium. Since then, we've kept fish from most continents in it however as of late, we're back to where we started, with South American fish only.

There's quite a few mangrove roots spread throughout the tank. Both in the two rear corners to partly cover the suction and pressure sides of an external Eheim filter and several in the middle of the tank to provide some covered areas for the Loricariidae catfish. Underneath the sand with pebbles there's dirt. There's also a pleco hotel made of slate rock along with some ceramic caves and bamboo pipes for the same reason spread throughout the tank.

The plants consist of a few red *Nymphaea* lotuses slightly to the right in the middle of the tank, *Vallisneria americana* var. *gigantea* in the rear left and middle with some runners in front of the mangrove root dividing the tank. *Vallisneria spiralis* tiger mixed in with the

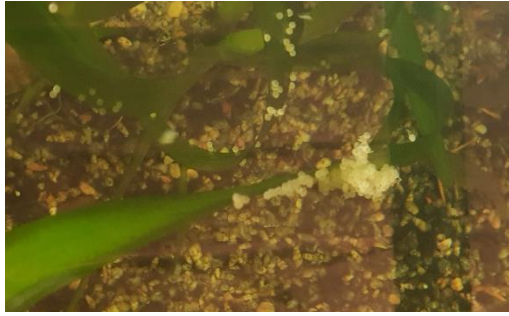
runners of the *Vallisneria gigantea* in the front left side of the tank, *Ceratophyllum demersum* floating around grasping onto some of the *gigantea*, *Salvinia natans* and *Pistia stratiotes* on the surface to provide some more shaded areas.

In the front right of the tank there are two Aqual Turbo 2000, and right next to them quite close to the surface there is an Eheim streamOn.

The tank is currently populated by a few hundred *Poecilia wingei* "el tigre", groups of *Baryancistrus beggini*, *Peckoltia compta*, L397, *Corydoras napoensis*, *Corydoras sterbai* and *Corydoras* CW006.

The eggs were first spotted in the mouth of the female el tigre endlers and more and more of them swam past with their mouths full. Damn I thought, the *C. sterbai* must have had a large spawn, although there were no eggs where they normally place them.

To my surprise the entire top slate rock of the pleco hotel was covered in eggs, and after searching the entire tank there were really large rows/clusters of eggs on the top of the *Vallisneria gigantea* as well. Some of the *Salvinia* had got stuck with the eggs that were on the *Vallisneria*. The size of the eggs was rather comparable to the *C. sterbai* eggs and nothing like the *C. napoensis* spawns I've had previously. The placement was very off to me though; the *C. sterbai* have spawned several times a week in that tank for many years and never had I seen anything like this from them before.



Eggs placed on upper surface of Vallis. Michael Petersson

Could it really have been that it was the *Corydoras* CW006? From what I heard no one had spawned them before and as they're in lineage 8 they're meant to be in need of quite a bit of dry period simulation.

I contacted Joakim Schön to see if he'd ever had his *C. sterbai* put the eggs down in a similar manner to this, but he didn't recognize this either. This made me hopeful that it may actually be the CW006.

Having gathered all the eggs, approximately 300, they were split into 3 different canisters, to increase the odds of getting some more to hatch. One had 3 drops of methylene blue, the second had esha 2000 and the last one had alder cones used. Sadly, with hindsight I should have spent more time separating the eggs from one another.

There were in total 31+23+24 hatched eggs, even though the ones that were infertile were picked out best possible the day after ~150 eggs. I've spawned them again after and the fertility rate was approximately 50% this time as well. My group consists of 1 male and 4 females so this could of course be a reason as to why. None of the spawns have been observed but the second spawn yielded ~1000 eggs.

The tank has been on a 10-day cycle for water changes for many years and that hasn't changed. Both spawns took place a few days after the third water change after having added more tannins to the water. The temperature was never raised, the water level was never dropped, the flow was never altered other than by the turbo filters being cleaned during every water change. They weren't fed less during this time nor were their diet altered. No reverse osmosis water was used nor rain water.

At the time of the spawn the water values were:

Ph: 6

KH: 1

Temperature: 22.4°C/ 72.3 °F

82 TDS



Fry at 7 days old / 6mm. Michael Petersson



1 month old. Michael Petersson



2 months old (largest specimen grown in larger tank). Michael Petersson

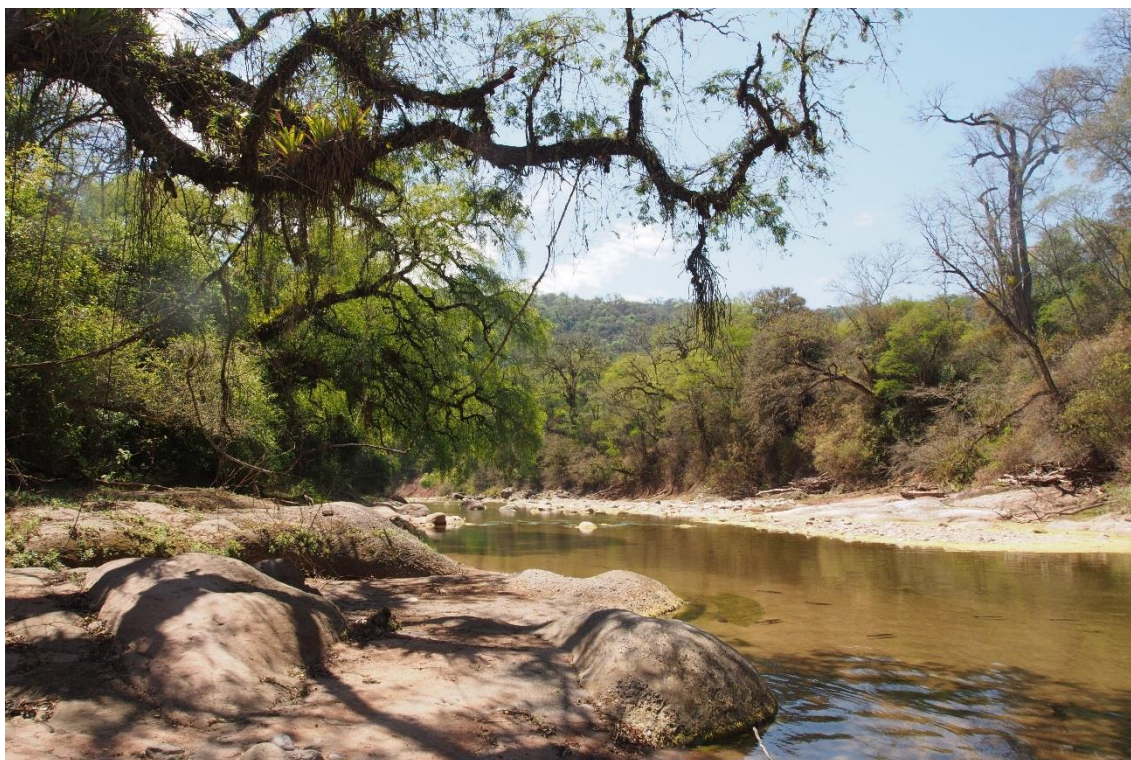


Juvenile in larger tank. Michael Petersson

A magical river in the Andean Forests

Sampling in the Río Popayan, at El Rey National Park, NW Argentina

Felipe Alonso (1), Guillermo E. Terán (2), Gastón Aguilera (2), Alejo Joaquín Irigoyen (3)



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“Going up that river was like travelling back to the earliest beginnings of the world, when vegetation rioted on the earth and the big trees were kings. An empty stream, a great silence, an impenetrable forest. The air was warm, thick, heavy, sluggish. There was no joy in the brilliance of sunshine. The long stretches of the waterway ran on, deserted, into the gloom of overshadowed distances. On silvery sandbanks hippos and alligators sunned themselves side by side. The broadening waters flowed through a mob of wooded islands; you lost your way on that river as you would in a desert, and butted all day long against shoals, trying to find the channel, till you thought yourself bewitched and cut off forever from everything you had known once -somewhere- far away in another existence

perhaps. There were moments when one's past came back to one, as it will sometimes when you have not a moment to spare to yourself; but it came in the shape of an unrestful and noisy dream, remembered with wonder amongst the overwhelming realities of this strange world of plants, and water, and silence. And this stillness of life did not in the least resemble a peace. It was the stillness of an implacable force brooding over an inscrutable intention. It looked at you with a vengeful aspect.”

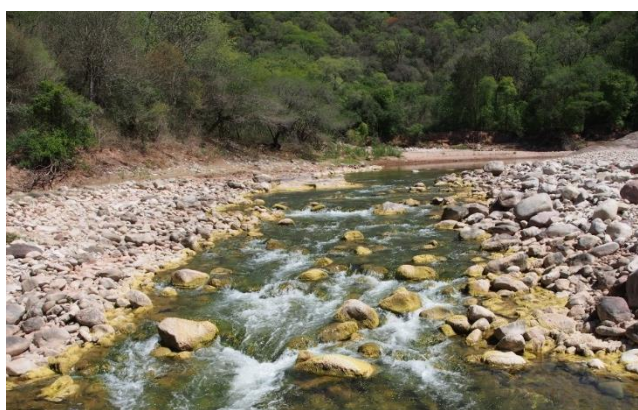
– Joseph Conrad, Heart of Darkness



Rivers running through the jungle have an enchanting immersive effect, like nature itself would be eating us (in all ways). We are both compelled by the beauty of the place but also suffocated by the heat, stung by bugs and different animals. The ambivalence of the beauty and hostility of the place is captivating. It takes us to a parallel time and reality. Like when you have just gotten up from a long nap. Joseph Conrad describes that sensation amazingly well in his novel Heart of Darkness which takes place in the Congo basin, but that sensation probably applies to many rivers that run through the Jungle, and we had the opportunity to visit one like that, particularly beautiful, in the oriental slope of the Andes, at northwestern Argentina.



Pool with slow flow and deeper waters



A riffle, a fast-flowing portion of the river

This river, called Río Popayán, is outstanding for its particularly clear waters, running in zig zag through the mountains and the forest. The bottom is covered with sand and pebbles and big rocks from the mountain rise at the sides, patiently sculpted by the river waters, creating big pools that can go to 4 or 5 meters deep and 40 to 50 meters long in some places,

intercalated with riffles and runs. It is surrounded by a dense forest with, ferns, orchids, and many epiphyte plants where “cai” monkeys (*Cebus apella*) feed on the canopy on bromeliads and other plants and where many colourful and varied birds settle. Numerous Tapir (*Tapirus terrestris*) tracks can be seen on the riverbanks, and sometimes one can be observed in the pools. Several animals as Puma (*Puma concolor*), pecaí de collar (*Dicotyles tajacu*) corzuelas (*Mazama gouazoubira*), osos meleros (*Tamandua tetradactyla*) and “cats” as yaguarundí (*Herpailurus yaguarondi*), ocelote (*Leopardus pardalis*) and “gato del pajonal” (*Leopardus pajeros*) can be observed in this forest, only to name a few. But undoubtedly, the most outstanding thing that immediately catch the eye when you step next to this river is underwater. Great schools of Sábalos (*Prochilodus lineatus*) and Bogas (*Megaleporinus obtusidens*) can be observed swimming in the river by hundreds and being chased by small schools of Dorados (*Salminus brasiliensis*).

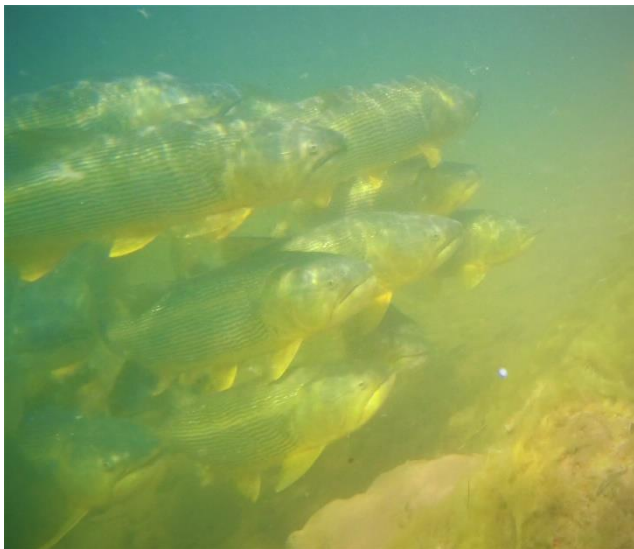
All this is easily observed from the shore as the water is crystal clear and the prominent rocks at the side offer great perspectives of the pools. Once you get closer to the river the smaller fish appear, big shoals of darters (*Characidium* spp.) are observed in the bottom, rising in flight like butterflies when one stands in the water and landing a few meters ahead. Shoals of hundreds of medium size tetras (*Astyanax*, *Acrobrycon*) can be seen swimming in the pools near a sunken tree or in a riffle, feeding against the current. Once you put your diving mask and snorkel, more diversity starts to appear under the surface, like the Trichomycterids and Heptapterids between the rock’s crevices in the riffles, or *Parodon* individuals frenetically swimming under the cascades against the current. The nets we carry also help us discover fishes hiding in the crevices and plants. The time passes and the day too but we cannot really tell as we are immersed in that world, the time seems to have stopped and for a while you forget that the rest of the world exists while you are just floating there in the river, only being.



Alejo during a video recording in one pool at about 3 meters deep



Prochilodus lineatus and *Astyanax abramis* shoals



A shoal of “dorados” *Salminus brasiliensis*, hunting in groups in a small pond of the Popayán River. Those fish prey on other species such as the *Heptapterus mustelinus*

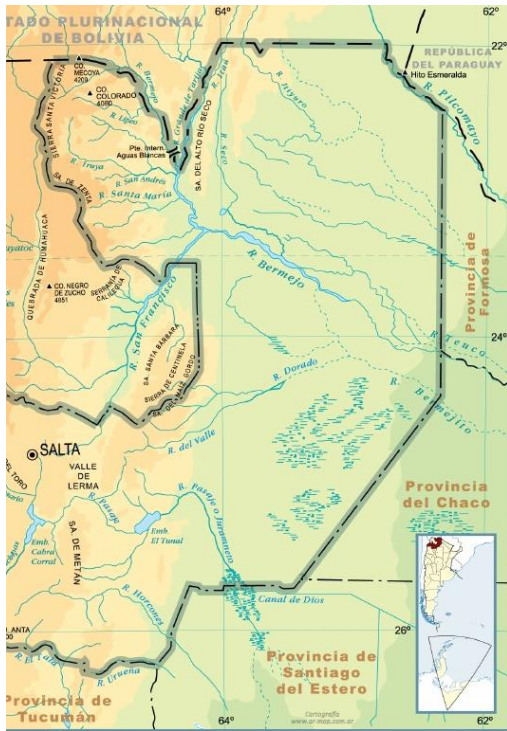


A shoal of *Parodon carrikeri* feeding over the rock at the entrance of a pool in the Popayán River, El Rey National Park.

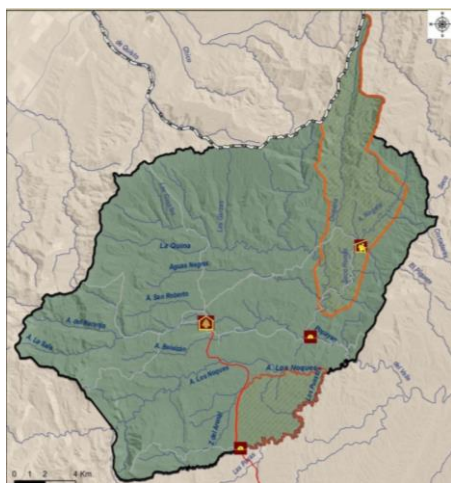
The Neotropical Region is the most biodiverse and one of the most understudied regions in the world encompassing more than six thousand (+6000) known species of freshwater fishes. Nevertheless, several threats lay over this area as a great agricultural expansion has taken place in the last decades which brought deforestation, lodging, agrochemicals, human provoked fires, besides other contaminant activities such as mining, hydroelectric dams, industries and the production of waste and sewer drains product of many cities that are rapidly growing in South America. These impacts are resulting in the extinction of many species mainly by habitat loss and fragmentation aid with contamination and climate change, a fatal combination putting many species and ecosystems in the brink of extinction. An extra problem comes with the poor knowledge available on the existing biodiversity in this region. This is reflected in the great number of new species that are discovered every year, meaning that there is a long way to go only to what we have and where it is, not to mention that the biology, ecology and life history of those species is mostly unknown. But this knowledge is the angular stone of any conservation policy and management planification.

We cannot conserve what we do not know, and unfortunately in this context, maybe we may never get to know many of those yet undescribed species. Conserving fish is important because they represent a relevant and major food source for many of the people inhabiting in the region and second because of their importance in the ecosystems and its functions. Besides its importance for humankind, conserving nature is a moral responsibility for humanity and preserving our Natural Patrimony is a global responsibility, in our opinion. In this context our team has been working tirelessly in the last

decades to characterize the fish biodiversity of Argentina, where according to Greenpeace we have lost 2,8 million of hectares in the last 12 years only. In a battle against time, we were able to make many new distribution records and also to discover and describe several new species for science, (i.e.: *Corydoras petracinii*, *C. gladysae*, *Microglanis nigrolineatus*, *Cambeva ytororo*, *Heptapterus mandimbsusu*, *Farlowella azpelicuetae*, etc.).



A map of Northwestern Argentina where the R. del Valle can be seen. The Popayan river is an affluent of that river as seen in the figure below of a map of PN El Rey



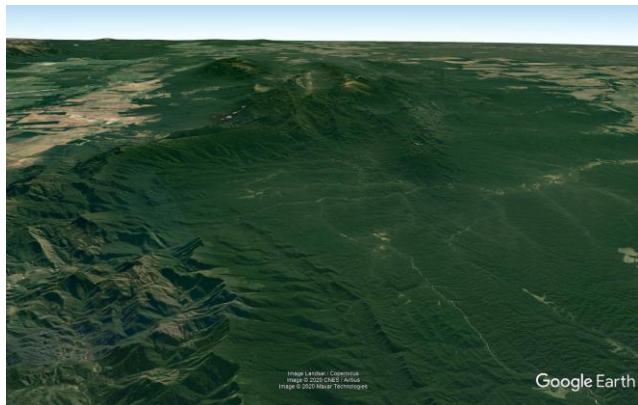
A map of El rey National park with the rivers it contains that form Río del Valle, part of the Bermejo basin.

In this context we received the support from the Catfish Study Group that partially funded our project for surveying the fish from the Bermejo and Pilcomayo basins in Northwestern Argentina, an area of great endemism and poorly sampled. Those rivers are part of the Paraguay River basin which is a tributary of the Paraná River. In this article we are presenting you with some advances of a first sampling to a very particular and beautiful river, the Río Popayan, of the Bermejo basin.



The team in the field

The Andes mountains range generates an orographic rainfall system, that in the subtropical area present a climate with a marked rainy season in summer. This determines that its eastern and lower slope has higher humidity, determining the existence of a montane jungle called Yungas. El Rey National Park, located in the province of Salta, is located on a system of low mountain ranges whose western portion is in that region and to the east it borders the Chacoan plain, presenting a transition zone between both regions in the eastern foothills of these mountains where a series of streams that run to the east form the Popayán River. These have very transparent waters and abundant filamentous algae on a bottom of rocks and boulders, with areas of riffles, runs and pools interspersed. This river then becomes the Río del Valle and, together with the Río Dorado, end up in the Chacoan region forming a wetland known as Bañados del Quirquincho, that is eventually connected during big flooding to the Bermejo River basin.



An aerial Google Earth view of the Río del Valle basin, in Salta Province, NW Argentina. The north is in the horizon and the west at the left. It can be seen it originates in the eastern portion of the Andes Region and flows to the east into the Chacoan floodplain, forming a wetland called Bañado del Quirquincho, which is connected to the Bermejo River basin

The transition from the Andean region to the Chacoan plain represents a drastic ecological change that is reflected in the isolation of the species from the mountain region. When the Andean fast-flowing rivers with rocky bottoms, high slope, and high seasonal torrentiality, enter the Chacoan plain, an important decrease in its slope and water flow speed occurs, and the bottom become of clay, without stones. These differences result in a drastic ecological change that represents a barrier for many species and, therefore, many species became endemic to the Andean headwaters; that means, they are only found in that place of the world. In October 2019 we travel to El Rey National Park to study fish diversity in one of these rivers. We wanted to know which species live there, how they use the different portions of the river, and make observations on their behaviour in nature. Those studies are of main importance to understand how these ecosystems works and how those species evolved, besides providing important data to design appropriate management and conservation projects. To achieve these objectives, we collected fish with different fishing arts, and perform a series of dives and underwater videos. Diving consisted of upstream transects, specimen count, ad-libitum observations of behaviour and habitat use. Habitat use record focused on: in which place of the river the species were observed; registering the substrate and depth for that places, the

individual size of individuals observed, the number of individuals of each species (abundance); and if they were forming shoals or were associated to other species. Feeding and antipredator behavior patterns of the individuals was observed and registered. Fixed cameras with bait located in the pools were also used. Additionally, specimens were collected using different fishing nets and electrofishing and alive pictures were taken *in situ* in a photography aquarium.

Some voucher specimens were preserved for precise determination in the laboratory and for future studies of this diversity they are deposited at a national public biological collection that can then be consulted by any researcher that wants to study those species (for anatomy, taxonomic status, to evaluate environmental changes, etc). Biological collections are poorly known to the public, but they are one of the cornerstones of the knowledge about biodiversity and conservation. They consist on repositories of nature, with preserved specimens of different species and areas, systematically classified to species level, and catalogued with a unique number (lot number) and associated data including date, collectors, river basin, location (with coordinates) and all other data considerer as relevant by the researchers. This deposited material and the associated data are the base many scientific studies. Therefore, it is essential to have a broad and significant sample of species, different ecoregions, rivers and protected areas, since these data are also used to evaluate and monitor natural populations, study their changes over time, evaluate their conservation status, pattern distribution dynamics and define specific policies for that biological diversity.

The Catfishes of The Popayan River

With respect to catfishes is interesting that in this river the Siluriformes where not particularly diverse neither abundant. That is an interesting fact considering that much more species and abundances are observed on other rivers of this basin. In total, five species of this order were collected in this first sampling: 2 Trichomycteridae (*Trichomycterus barbouri* and *T. corduensis*), 2 Heptapteridae (and

Heptapterus mustelinus) and 1 Loricariidae (*Rineloricaria steinbachi*).

Heptapterus mustelinus (Valenciennes, 1835)



This is a middle-sized catfish species, reaching 26 cm SL, it is widespread in La Plata basin. It is a benthic species with carnivorous diet, mostly insectivorous. It is easily distinguished from the other species in the area by presenting a long tail and a long adipose fin that is joined to the caudal fin. This last fin has a straight distal margin inclined from its vertical to the caudal direction.

Rhamdella aymarae Miquelarena & Menni, 1999



This is a relatively small catfish, not surpassing 20 cm in length. It is found in the Bermejo, Pilcomayo and Urueña basins. It differs from other species of the genus by presenting: small eyes, wide interdorsal and interorbital distance, long adipose base, short pelvic fins and short barbels.

Rineloricaria steinbachi (Regan, 1906)



This species is widespread in the Bermejo, Juramento, Pilcomayo and Salado basins, exclusively in the Andean region. It is distinguished by the lack of abdominal plates, possessing 10 caudal fin rays, and up to 18 teeth

in each premaxilla with wide and almost symmetrical cusps. Males present a wider head flattened with long hypertrophied odontodes on its sides and on upper side of branched pectoral-fin rays. Males are generally observed during the spring guarding clusters of eggs that are deposited on the bottom surface of stones forming crevices.

Trichomycterus barbouri (Eigenmann, 1911)



This is small species (<11cm SL) was described from specimens of the Río Beni in the Amazon Basin in Bolivia but it has a wide distribution reaching La Plata basin in north-western Argentina. It can be distinguished by presenting a longitudinal band along the side of the body, an elongated first ray of the pectoral fin, the pelvic fins fall short of the urogenital opening. It feeds mainly on insect larvae.

Trichomycterus corduensis Weyenbergh, 1877



This small species (<5cm SL) inhabits the Río de la Plata basin, in north-western and central Argentina and the Amazonas basin, at western of Bolivia. It can be distinguished by caudal peduncle smoothly continuous with dorsal and ventral profiles of trunk; papillae-like structures present on body; unpigmented region on the dorsal-fin origin absent and 13 principal caudal-fin rays with distal margin straight. The spawning season for this species has been reported to occur from October to February.

So where were the fish?

The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' but 'That's funny...'

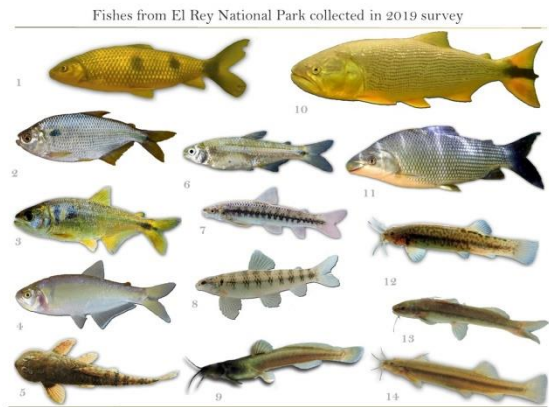
- phrase attributed to Isaac Asimov.

Scientists observe natural phenomena and try to understand how they happen. We wondered which species of fish inhabit in the Popayan river at El Rey National Park, in which areas of the river they inhabit and what are their most conspicuous behaviours. But studying an environment like that is not easy, as it is not easy to observe what happens underwater. Things that happen in that underwater world are often surrounded by a certain mystery because it is difficult to observe so we tend to not know too much what is going on below the surface. Therefore, our society in general knows and values little of these types of ecosystems and their inhabitants.



Electric fishing technique in a secondary creek. A low-impact technique that allows to collect sneaky species that hide among the stones

A total of 16 species were recorded in this sampling, of which 5 are based on a single specimen, indicating that future sampling efforts are still needed, to reach to a representative sampling of this basin.



Some of the species collected during this samplings: 1 “boga” *Megaleporinus obtusidens*, 2 “mojarra” *Astyanax abramis*, 3 “dientudo o bocacha” *Oligosarcus bolivianus*, 4 “mojarra” *Acrobrycon ipanquianus*, 5 “viejita” *Rineloricaria steinbachi*, 6 “mojarra” *Odontostilbe microcephala*, 7 *Parodon carrikieri*, 8 *Characidium zebra*, 9 “yuska” *Heptapterus mustelinus*, 10 “Dorado” *Salminus brasiliensis*, 11 “Sábalo” *Prochilodus lineatus*, 12 “torillo” *Trichomycterus corduensis*, 13 “bagre” *Rhamdella aymarae*, 14 “torillo” *Trichomycterus barbouri*.

As for the spatial use and behaviour of fish we can highlight that the larger represented species in the pools were *Salminus brasiliensis*, *Megaleporinus obtusidens* and *Prochilodus lineatus*, the last two forming mixed shoals. *Prochilodus lineatus* is notably more abundant and generally was observed feeding, scraping the algae from the rocks in which they leave the marks of their mouths. *Salminus brasiliensis* was observed in shoals, hunting mainly on the shoals of *Prochilodus*, *Megaleporinus* and *Astyanax*. Large specimens of these species are less common in other portions of the river of lower depth and higher current speed. On the other hand, there are specialized species to the rapids and riffle areas with high flow speed and shallow waters such as the fish of the genus *Characidium* and *Parodon*, that are usually observed in small shoals in the entrance waterfalls to the wells, feeding on small invertebrates and algae, respectively. The catfish of the genera *Rhamdella*, *Trichomycterus* and *Heptapterus*, are usually found mainly in the sliding areas among the stones as well as *Rineloricaria steinbachi*. Tetras of *Astyanax abramis* species are especially abundant in wells, in large shoals of hundreds of specimens, generally associated with some wall with algae

or sunken trees, where they were observed feeding on suspended particles that are dragged by the current. In contrast, the tetra *Acrobrycon ipanquianus* was observed in riffles areas and high current speed sections feeding counter current.



An interesting fact: *Leporellus pictus* (Kner, 1858) was recorded only by visual census and video records but no specimens were collected showing the importance of the complementation of these techniques. Try to find one in the video capture above.

The study of behaviour patterns of these species and how they use their environments is essential to understand their ecology, which helps in the design management of conservation plans for these ecosystems and to quantify the effects that different anthropic activities can have on fish.



A good working day ends with a warm meal at the camp and some beers to share with the team next to the fire while planning the next day and sharing anecdotes of other trips

Conservation and perspectives

One of the mid and long-term aims of our research group is to evaluate the efficiency of protected areas in fish conservation in the north-

western Region of Argentina, and to propose priority areas and specific measures for their management. To do this, it is essential that we can move forward in better understanding our fish and their little-known ecosystems, and that we can raise awareness in society both that we have unique and very fragile species and ecosystems and that we need to encourage and support the study of them. There is a long way to go and we need the support of all social and political actors and society to achieve these goals.



From left to right: Alejo Irigoyen, Germán Ríos (park ranger), and Gustavo Zamora

In this brief note we present some of the preliminary results resulting from a single sampling, and that serve to begin to understand how this ecosystem works, how many species are in it, and how they use the river. In the future, we plan to include other regions of this basin, such as the Chacoan part, the Bañado del Quirquincho and the area of Apolinario Saravia, which is subject to a great environmental impact due to intensive agriculture. In this way we will be able to evaluate the effect of these activities on the fish assemblages of the area, as well as to understand how the migrating species such as *Salminus brasiliensis* and *Prochilodus lineatus* use the basin, and how effective the protected areas of the region are to the conservation of these populations. Also, the discovery of new species in future samplings in this region is a great possibility.



From left to right: Gastón Aguilera, Guillermo Terán, Felipe Alonso and Baltazar Bugeau

Acknowledgements. We especially thank to Gustavo Zamora and Baltazar Bugeau for their collaboration in the field during the samplings. To the Catfish Study Group (CSG) for the financial support for this expedition. Also, we thank to German Rios and Federico Yáñez for their support during the sampling and all the staff of El Rey National Park and the people of the NOA delegation, especially Juliana de Gracia and María Elena Sánchez.



To enhance the role that the CSG plays in supporting research into catfishes and to foster a closer relationship between scientists and aquarists, the committee proposed a Research Support Fund (RSF) be established in 2018. The RSF will provide small sums (e.g., £500) to students and other researchers to support fieldwork, museum visits, laboratory work and page charges in peer-reviewed journals. Award recipients will agree to provide two articles for the CSG journal OR present their research at a CSG event via poster or talk. Like any new program, the RSF is a work in progress and we welcome the input of subscribing members. Email us at: secretary@catfishstudygroup.org

Where does the money come from?

RSF awards will be drawn from journal subscriptions, advertising revenue, member and corporate contributions, back issue purchases, donated auction lots and other fund-raising activities.



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Colour and forms of Common *Ancistrus*

Mark Walters



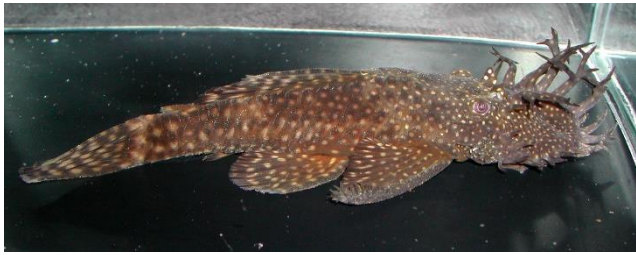
Ancistrus sp, Geoff Haglund.

After I had ticked off the three Corydoradinae genera I was keeping to contribute towards the CSG Breeders Award Programme which was initiated in 2007, I needed to start to concentrate on new species to gain the necessary points towards silver and gold awards. In short, the silver award required breeding species from 7 different catfish genera and the gold 10 different genera – plus accumulating points from lots of species within each genus. That's enough about the detail of the now defunct scheme, but if nothing else it certainly encouraged me to extend my collection beyond *Corydoras*, *Aspidoras* and *Scleromystax* which seemed to fill almost all of my tanks.

An obvious choice was a 'species' which contributed to my current fish-house occupation which is probably 75% Loricariidae or 'pleco' filled. Although a mundane addition in the eyes of many, I owe a lot to the common bristlenose catfish instilling a passion in me for

suckermouth catfish. Despite their reputation as a beginner or amateurs' fish which doesn't deserve a place in the tanks of a 'serious' aquarist, they have always found a place somewhere in my tanks providing me with the joy of regular offspring when more difficult species seem to just serve to frustrate my aquatic ambition.

Now, the reason I parenthesise 'species' when describing the common bristlenose is because of its sketchy origin, which can be best summarised in an excellent article hosted on Planet Catfish (the go-to place for online reference to all-things catfish). The article, by world Loricariidae authority Ingo Seidel, summarises the species as most likely having been derived from the species *Ancistrus cirrhosus*, leading to the usual naming of the common bristlenose as *A. cf. cirrhosus*. Prior to this hypothesis on its origin, the species was widely known by its Planet Catfish label of *A. sp.3*.



Ancistrus cf. cirrhosis. Steve Grant

I think most people know the species we are referring to and have probably kept common bristlenose in some form or other during their fish keeping life. The species is highly adaptable to low and high temperatures, varying water quality and chemistry, although thrives best in typical 'community aquarium' conditions around 22-24C with neutral pH and soft water. Under these conditions with an appropriate omnivorous diet and the provision of some bogwood and a cave, it is likely that the fish will settle well and readily breed after only between 9-12 months of age. The fish continues to tick all the ideal catfish parameters with the bushy nosed males dutifully tending to the eggs and fry prior to them being released in the aquarium after 2-3 weeks. Very rarely have I needed to intervene and rescue eggs or fry for artificial raising which is the norm for many other catfish species. They also come in a variety of forms with additional types which may or may not be derived from the same '*cirrhosus*' species.



Common *Ancistrus* Juvenile. Mark Walters

The common *Ancistrus*

My first common *Ancistrus* were a pair of brightly coloured golden albino bristlenose, primarily to gain an extra genus for the aforementioned breeders scheme, but also to blood me in the seemingly complicated and experienced world of serious pleco keeping! The

gold form is of course a black pigment-lacking form of the common brown bristlenose and will produce plenty of brown babies (non-albino) along with the more desirable gold (albino) babies. I still get a warm feeling when I discover a male bristlenose fanning a new clutch of eggs or bunch of fry, probably due to triggering fond memories of my first pleco breeding experiences.



Albino Common *Ancistrus*. Juan Rosales-Moreno

I have kept a number of the colour forms over the years including calico, which has a marbled or mottled pattern, and super-red *Ancistrus*. The latter is sometimes called German super-red which is an obvious allusion to its origin and development as a colour form in Germany over 20 years ago. It is now firmly fixed in the hobby and is slightly more desirable than the more common forms, if auction prices are anything to go by.



Calico *Ancistrus*. Ralf Heidemann



Super Red *Ancistrus*. Ralf Heidemann



Juvenile Super Reds. Mark Walters



Longfin Green Dragon. Greg Sage



Longfin Green Dragon juveniles. Marcin Glowacki

A fourth colour form is one that I have only witnessed in the USA, the green dragon *Ancistrus*. As its name suggests it has a greenish tinge, as distinct from brown. I assume the dragon moniker is due to it being often available as a long-finned form, but I could be wrong. I recently visited a catfish convention in the USA and green dragons were available from breeders, if I had been in a position to transport fish back, I probably would have picked some up out of curiosity. Other delegates were surprised that it wasn't so widely available (if at all) in the UK or Europe.

Indeed, all the colour forms of the common *Ancistrus* can be found, whether you like it or not, in long-finned form. Depending on the colour, the price of the long-finned fish is usually 2 or 3 times that of the normal finned varieties indicating their popularity. Not only are the fins significantly extended but the bristles of the male are also often much longer than normal.



Super Red Longfin. Dan Griff

The general consensus is that the common *Ancistrus* has been in the hobby for so long, and with such an unclear past, that its regular occurrence as a genetic form whether in unusual colour or extended fins is not too deleterious for the hobby. If it encourages more people to keep and enjoy other catfish species then so be it. For others, they remain an aberration which have no place in serious aquarists' tanks.



Longfin Albino *Ancistrus*. Ralf Heidemann



Ancistrus sp.4. Ralf Heidemann



Longfin Calico *Ancistrus*. Ralf Heidemann



Calico Longfins. Ian Waterfield

Ancistrus sp.4

Approximately 8 years ago, I exhibited a tank full of another type of ‘manmade’ *Ancistrus* at a CSG Convention. As a result of the interest in the species and coming together of aquatic icons including Ingo Seidel and Julian Dignall (owner of Planet Catfish), it was debated and agreed that the fish was distinct in its origin when compared to *Ancistrus* sp.3 (cf. *cirrhosus*). Hence it was coded as *Ancistrus*. sp.4.

In the hobby, the species was well known as the lemon blue-eyed *Ancistrus*, a leucistic (partial lack of pigment) form of bristlenose catfish different in origin to the *Ancistrus* cf. *cirrhosus*. To complicate its identification, it has been erroneously identified as L144, which was the name given to a single colour morph specimen of an unidentified *Ancistrus* species. At least those who had persisted (and some still do) to refer to this fish as L144 recognise it as distinct from *A. cf. cirrhosus*. Hopefully the incorrect name of L144 has been dropped by most who tend to refer to it as the lemon blue-eyed *Ancistrus*, although the presence of blue eyes seems to be somewhat artistic license by keepers who want to sell their offspring for as much as possible! In my specimens at least *A. sp4* has eyes standard for a leucistic species, i.e., black, although as you can see in Ralf Heidemann’s picture, sometimes the ‘iris’ can sometimes appear bluish.

In comparison, the species tends to be daintier than the common *Ancistrus*, growing to a smaller size (10-12cm SL) with more slender proportions. The male also exhibits an obvious red area behind its head where blood capillaries accumulate, not obvious in *A. cf. cirrhosus*. The yellow colouration of the body is less intense than the gold and red forms of the more common bristlenose. Although they breed true, occasionally fry appear with patches of dark pigment on their bodies which detracts from the lemon colouration of the majority of the offspring.



Ancistrus sp.4 with patches of dark pigment. Ralf Heidemann

A long-finned variety of the *A. sp.4* also exists in the hobby, and I suspect that some fishkeepers have played at God by crossing them with the more common *Ancistrus*, although it is not obvious what the intention is. If they are hybrids of different species rather than selective breeding of one species, then this is to be frowned on.



Longfin *Ancistrus* sp.4. Ralf Heidemann

Occasionally a much lighter coloured fry can appear amongst a batch of fry and it would seem that through selective breeding of these lighter-coloured fish a new colour form has developed called the snow-white *Ancistrus*.

I picked up a small group of snow-white *Ancistrus* at the 2018 CSG Convention, brought to the UK by Ingo Seidel. After 12 months they had matured enough to start breeding and I have started to distribute them through aquatic auctions. Ingo suggested that the fry could be quite sensitive and I have experienced some losses if the water quality deteriorates, unlike the much hardier common bristlenose. I have

kept them in quite cool conditions, down to 22C, which seems to suit their requirements, and they breed regularly with 80-100 fry from each spawn. They share characteristics with the *Ancistrus* sp.4, including their small size and lack of melanin except for their black eyes. Again, they occasionally produce fry with pigment on their flanks which is quite striking against the pearly white skin.



Young male Snow-white *Ancistrus*. Mark Walters



Snow-white *Ancistrus* pair and fry. Mark Walters

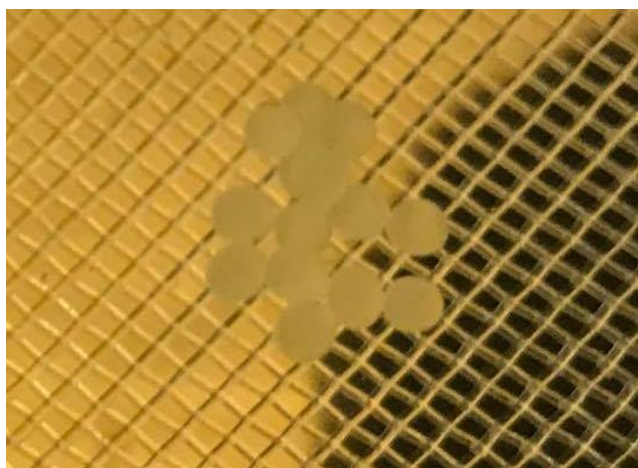


Snow-white *Ancistrus* fry. Mark Walters

Dan Griff has noticed that even the eggs of Snow-white *Ancistrus* are paler than *Ancistrus* sp. 4.



Ancistrus sp. 4 eggs. Dan Griff.



Ancistrus Snow-white eggs. Dan Griff.

I don't see any slowdown in the interest people have for the various forms of bristlenose catfish which offer so much as an ideal catfish which can be accommodated in relatively small aquaria. I expect more new forms will be developed from the common species, furthering the interest to many catfish keepers. I expect there will always be a tank or two of bristlenose in my fish house at least.

Acknowledgements

Thank you to the photographers for allowing use of their images.



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A fish named *Rita*

Steve Grant



Rita gogra. Image by Beta Mahatvaraj

Catfishes from India and some of the adjacent countries don't tend to be imported into Europe very often. This short article is a pictorial tour of one of those catfishes.

Rita Bleeker, 1853 are present in India, Pakistan, Nepal, Afghanistan, Myanmar, and Thailand. There are currently seven valid species but we only tend to see one or two of them in the European hobby. Thanks to those in the Acknowledgements section we can present all but one of them here. The etymology of the genus name is taken from the type species of the genus, and is discussed further there.

Rita bakalu Lal, Dwivedi & Singh, 2017

Described from the Godavari river system, Telangana and Andhra Pradesh, India. The largest specimen measured 11.1 cm SL. The species name is taken from its vernacular name Bakalu.

Live colouration is grey-black on the dorsal region, lateral side above and below the lateral

line and ventral side white; base of the dorsal and adipose fins grey; base of pectoral, pelvic and anal fins white; skin surrounding the eyes tinged black. It most closely resembles *R. kuturnee*. According to the describers it can be differentiated externally by origin of the anal fin anterior to the origin of adipose fin vs. in *R. kuturnee* anal fin originates opposite to adipose fin; caudal fin rays 20–22 (vs. in *R. kuturnee* 16–18); a longer mandibular barbel (extending beyond hind edge of eye vs. reaching up to hind edge of eye), and skin colour at edge of eyes (black vs. yellow). However, other than the caudal fin ray numbers, none of these accord with the description and drawing of *R. kuturnee* in Sykes, (1841). The adipose fin placement in *R. bakalu* matches that with the holotype of *Arius hastatus* Valenciennes, 1840 (currently a junior synonym of *Rita kuturnee*).

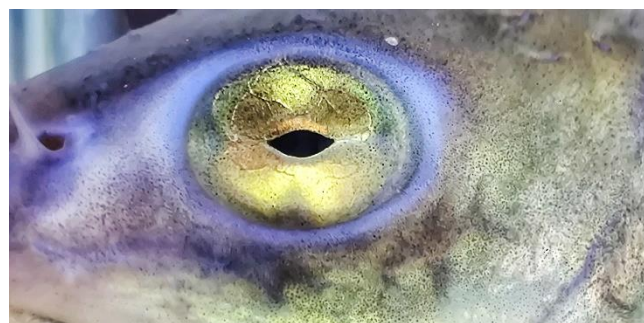
Rita chrysea Day, 1877

Found in the Mahanadi river system in Orissa (Odisha), India. It reaches 19.5cm TL. The species name is a form for the word golden in Latin as

Day described the colour pattern as yellowish, with the ends of the fins greyish, however, specimens identified as this species have dark patches as seen in the images, making them very similar to *Gagata itchkeea* (Sykes, 1839), but that species does not have any serrations on the dorsal fin spine. When stressed they do drop some of the dark colouration, as can be seen in Balaji's picture. *R. chrysea* can be identified by the combination of large eye and the anterior edge of the dorsal fin spine being serrated for at least the basal two-thirds of the spine.



Rita chrysea Rourkela, Odisha. Balaji Vijaykrishnan



Rita chrysea Munduli barrage, Mahanadi River, Odisha. Balaji Vijaykrishnan

Rita gogra (Sykes, 1839)

Synonyms: *Arius pavimentatus* Valenciennes, 1840; *Gogrius sykesii* Day, 1867

Found in the Krishna, Narmada, Godavari, and Tungabhadra river systems, India. It reaches 26cm TL. The species name is taken from one of the vernacular names in Marathi: Gograh. It can be identified by the dorsal surface of head, between eyes and supraoccipital, covered with a thick layer of muscle vs. covered only with skin (bones visible); and pelvic fin being black or dark brown (sometimes not fully in smaller

specimens). It also has a distinctive yellow or brown colour, sometimes with black spots.

Specimen BMNH 1867.5.30.10 should be investigated as a possible syntype of *Gogrius sykesii* as it is a Day specimen, under that name, from Madras.



Rita gogra Juvenile, Tunga River at Gajanur Dam, Shimoga, Karnataka. Dr Ashwin Rai.



Rita gogra Narmada canal, close to Ahmedabad. Dr Yasser Rafique



Rita gogra Adult, Krishna river, near Sangli. Note the very long upper jaw and snout not previously documented. Courtesy of Shankar Balasubramanian.

Rita kuturnee (Sykes, 1839)

Synonyms: *Arius hastatus* Valenciennes, 1840.



Rita kuturnee Krishna River, Sangli, southern Maharashtra. Beta Mahatvaraj

Found in the Tungabhadra, and Krishna river systems, India. This will reach up to 30cm TL. The species name is taken from one of the vernacular names in Marathi: Kuturnee. It can be identified by the large eye; dorsal fin spine smooth anteriorly, except for few serrae basally; and caudal fin rays 16–18.

Rita macracanthus Ng, 2004

This species is the westernmost species, being found in the Indus River drainage: Afghanistan, Pakistan, and north-western India. It reaches 27.1cm SL. The species name is taken from the Greek *makros* meaning long, and *akantha* meaning thorn, and refers to the long dorsal and pectoral fin spines. It can be identified by the combination of small eyes; dorsal spine reaching to middle of adipose fin base vs. dorsal spine reaching to origin of adipose fin base in *R. rita*.



Rita macracanthus AMS B.7961. Mark Allen

Rita rita (Hamilton, 1822)

Synonyms: *Rita buchanani* Bleeker, 1853; *Arius cruciger* Owen, 1853; *Arius ritoides* Valenciennes, 1840.

This species is found in Pakistan, India, Nepal, and Bangladesh. It reaches 150cm TL. The species name is taken from a vernacular name from Bangladesh: Rita. It can be identified by the combination of small eyes; dorsal spine reaching to origin of adipose fin base. According to Gupta (2015) it is considered as critically endangered in Bangladesh, and Near Threatened in India. Gupta states it is a commercially important catfish species which has good market as a food fish as having excellent taste and good protein content in its flesh. Recently due to over exploitation and loss of breeding grounds, populations of this fish species are facing the threat of extinction. Hamilton (1822) said it is a “clumsy lurid animal”.



Rita rita subadult, Arunachal Pradesh, India. Hayath



Rita rita subadult, Arunachal Pradesh, India. Hayath

Gupta reports that it is a riverine fish; a bottom dweller which prefers muddy or clear water. It can withstand low salinity, low dissolved oxygen concentration, low temperatures, and high turbidity. In the wild it is a carnivore, eating copepods, fishes, insects, molluscs, shrimps. A muscular genital papilla is present in males and becomes distinct and prominent during breeding period. The tip of the papilla becomes deep red in colour during this period because of numerous blood vessels. The genital aperture is introvert and slit-like in males while in females it is large, extrovert and swollen.

AMS B. 7961 and 7955 are Bleeker specimens. They do not accord with the sizes in the description of *R. buechanani* (a replacement name for *R. rita*). Their pectoral and dorsal fin spines match *R. macracanthus* so their non-type status for *R. buechanani* is confirmed here. The author traced two specimens RMNH.PISC.6878, which are listed as syntypes of *Rita buechanani*. Esther Dondorp of RMNH has advised that they are Bleeker specimens, purchased in 1879. Their old label states “Bengalen”. Based on their measurements, the larger specimen is close but not exact to the measurements in Bleeker (1853). They are possibly two of the three syntypes.

Rita sacerdotum Anderson, 1879

This is the easternmost species, found in the Irrawaddy, Sittang and Salween River basins, Myanmar and west Thailand. It reaches 200cm TL and is a target for sport fishermen.



Rita sacerdotum 10cm juvenile. Nonn Panitvong

The following fascinating text is quoted from the original description: “In that long reach of the Irrawady in which the pagoda of Thingadaw occurs, this fish is considered very sacred and is under royal protection, a mandate of the sovereign existing which makes the death of one of these fish by hook or by net a very serious offence, and fishing for 3 miles above and below the little island of Thingadaw is prohibited. The fish are daily fed by the priests who reside on the small rocky islet and also by passing devotees. The most interesting feature, however, connected with this fish is the peculiar habit it has of responding at great distances to the call of *tit-tit* when oft repeated. After many calls of *tit-tit*, I observed the fishes, at some considerable distance off, rise to the surface, apparently answering to the call by making straight for the banks of the island, where they soon showed themselves. Many were of great size, measuring, in all likelihood, nearly 5 feet in length. They were so tame that they raised their heads above water to be fed, and even permitted me to introduce my hand into

their mouths. They also offered no objections to their feelers being felt and pulled, and the devout Burman is wont to adorn their heads with gold leaf, as a work of merit.”

This information clearly led to its species name, which in Latin essentially means ‘priests’. Nonn Panitvong states that they are called ‘pig catfish’ in Thailand, clearly because of their large and rotund shape. Having read the information from the original description, the author proposes we should call this fish the Priests Catfish, in deference to how it got its name. Nonn was informed that when the large specimen pictured was caught, it vomited fruit. They are also carnivorous.



Rita sacerdotum 25kg adult. Nonn Panitvong

Acknowledgements

Thanks to Beta Mahatvaraj, Yasser Rafique, Hayath, Balaji Vijayakrishnan, Shankar Balasubramanian, Ashwin Rai, Nonn Panitvong, Mark Allen, and Esther Dondorp for providing images.

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First successful breeding of *Trachelyopterichthys taeniatus* (Kner, 1858)

Ian Wallbridge



Trachelyopterichthys taeniatus male. Image by Steven Grant

As far as the author (and Editor) knows the Auchenipterid *Trachelyopterichthys taeniatus* (Kner, 1858) has not been successfully spawned before in the aquarium (although Jeremy Basch has documented a spawning embrace, which shows the male using his proportionately longer dorsal fin spine to hold the female whilst he inseminates her with his modified anal fin) (<https://www.youtube.com/watch?v=2Ygi8Hnimo>).

The fish were acquired from Aqualife Leyland, UK on the 22nd March 2020. I got six adult fish but at the time I was unsure of the sex ratio but was happy to say I had at least one of each as it proved to be. I since found out that males have a longer dorsal fin spine (with larger serration on the distal half of the anterior edge), longer and thicker leading spine of the anal fin, and different urogenital opening (see Grant, 2010).



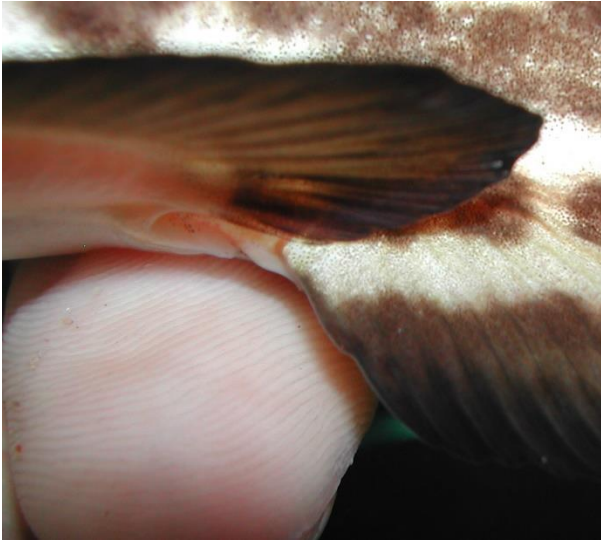
T. taeniatus female dorsal fin. Steve Grant



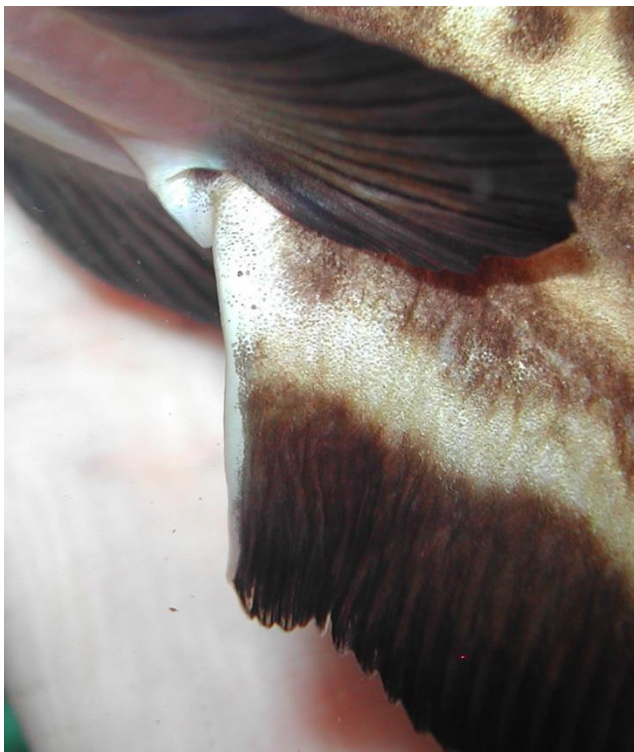
My female specimen



T. taeniatus male anal fin. Steve Grant



T. taeniatus female anal fin. Steve Grant



T. taeniatus male anal fin. Steve Grant

After being held in a quarantine tank I placed them in a 100cm long, 50cm wide, and 38cm deep tank, with a built-in filter and Fluvel 3plus, and bare bottom.

The tank contains homemade slate caves, bogwood, plastic tube, and plants. Other occupants are various *Corydoras* and an *Ancistrus*.



Breeding tank

The fish had been offered various foods to try to get them settled in (frozen bloodworm, white worm and red crumb) but it took a couple of weeks before they started to show interest at feeding time. Soon after that they were happy to actively swim around and take what was offered.

I was doing 25% water changes every week with water from the tap ph7 (I don't take other readings). The fish room fan heater was at this point not on as the outside temperature was fairly high (it was a record high in the UK for the time).

The first spawning was found the 19-6-2020 and totally unexpected, the eggs were free roaming in the tank near the Fluval filter, amongst some broken moss ball, just outside their cave which they both shared.



Eggs found in a broken moss ball (circled red)

46 eggs were collected which on inspection most looked a little milky. I placed them into a floating breeding trap in the tank.

The room temperature was 79 deg. F, 26C. Water temp 72 F, 22 C. The tank was due its weekly 25% water change. After 24 hours I was down to 6 eggs as expected as most were infertile, then 48 hours down to one, then none.

Would they do it again? I hoped and I didn't have to wait long; only 4 days to find 15 more eggs. Some were infertile and some possibly fertile, found in the same location. Unfortunately, no success again with hatching.

It was not until 17-7-2020 that they spawned again, that I realised I may have previously missed fry due to them been so small. Most eggs were infertile again but I did get three to hatch, but lost them soon after the egg sack was gone. Now I had seen how small these were I knew that I may have missed fry before.

Spawn number 4, 27-7-2020, again a mixed batch of infertile and fertile, the fertile eggs being almost totally clear and hard to see in the tank. Again, they were found free roaming in the tank so I am not sure if the eggs are laid in the tube, caves or in the plants, like the other woodcats I breed.

These were placed again in the floating trap with some of the broken moss ball. I had around 6 fertile eggs this time.



Eggs after two days with developing fry

After 7 days three fry came out of the egg. They were tiny and almost transparent (which is possibly why I thought I had no fry from the previous spawnings).



Eggs found 27 July 2020. Note the holes in the bottom of the breeding trap

After two days you could just see the fry developing in the egg.



Newly hatched fry at 7 days old



Fry at 7 days old



Fry at 12 days old

After 12 days the fry had used up their egg sac.

These were offered newly hatched brine shrimp to feed on. Two took to the food while the other went missing (it may have got through a hole in the bottom of the trap). The remaining two fed happily on brine shrimp nauplii. While I was working away one night, I returned home to find only one young fry in the trap. I guessed the other had jumped out into the main tank, not to be seen again.



Fry at 14 days old



Fry at 29 days old



Fry at 40 days old



Fry at 56 days old



Surviving juvenile 7cm, 4 months and 10 days old

The lone survivor has since been raised on various foods, brine shrimp, crushed red crumb, white worm and EBO supersoft artemia. It currently measures 7cm TL.

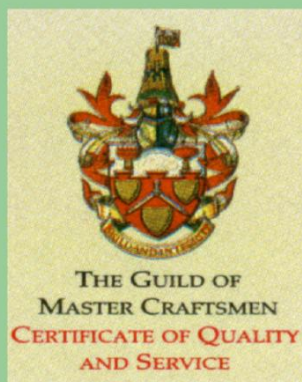
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