ISSN 0953-0029

LABYRINTH

Anabantoid Association
of
Great Britain

Newsletter No. 194 September 2019

REDISCOVERY OF THE SAPHIRE FROM BANGKA

Wentian Shi

I visited the island of Bangka four times between 2016 and 2018, to examine if there are any remaining habitats for *Parosphromenus deissneri*. The last study was in 2012 by Zhou Hang, 'Jungle Michael' and 'Team Borneo' which inspired my first visit in 2016 with Ji, Yuhan, Dai, Jianhui (Team NJB). The extent of the palm plantations was already visible from the plane. The plan was to check habitats, especially the holotype habitats, details of which were supplied by Horst Linke. These were in the centre of Bangka, in small branches and swanps in the middle range of the biggest river system.

However, the situation was even worse than expected as the whole area, from the mountain origin, to the middle range, had been turned into a vast palm-oil plantation and the waters were severely polluted or destroyed as a result. The swamp with a high *P.deissneri* population was completely dry and the blackwater river polluted by the farm and turned into a shallow, muddy stream. Walking through the remaining forest revealed only a newly-built oil palm farm and the trees inside the forest had been burnt so that the farm would not be recognised from the exterior. Only the most robust *Betta*, *B.edithae* remained in what had been the traditional distribution area for *P.deissneri.*

Turning south to the location of the new holotype of *P.deissneri*, where the fish still occurred in 2012, revealed that the river had been ruined by a new oil-palm farm along the river, the forest had been

burnt down and a pumping station built, although the water had recovered and was pH4.8, GH<0.5.

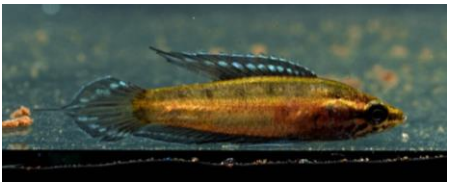
The region for *P.bintan* and *B.schalleri* was relatively well-preserved from human activities and a new small fast-flowing river with clean water was found, 1m deep with pH 5.1, and at 26-27C, heavily covered by plants such as *Cryptocoryne longicauda* and *C.bankaenensis* which provided shelter for 15 fish spp including the endemic *Sundadanio*.

A male in the tank of my team mate Dai.

Six months later, the new holotype of *P.desissneri* was revisited with Ji and we drove around the oil palm farm to the upstream area then went on foot along the river and across the forest to a small unpolluted branch of the river.

Here at the first attempt, a beautiful adult male with a long filament was secured. Finally the fish had been rediscovered!! The water was clear, not black, 0.5-1.2m deep, heavily covered with plants; pH 5.1; conductivity 6muS/m at 27.8C. The fish were hiding among plants or in holes under the wood. There were many Rasboras, Chocolate gouramis, *Betta edithae*, *B.simorum* as well as *P.deissneri* but only 10 specimens were caught probably because the water conditions had

changed. In 2008, it was black water but by 2017 it was clear.



The habitat of the original description, 150 years ago, was also explored but the development of a small town and mine nearby has destroyed the forest and river. The traditional area of their distribution between the downstream position from 1859 and the middle area in 1998 was also searched without result although we managed to find a very beautiful original swamp with perfectly preserved forest through which a group of monkeys were jumping. Unfortunately the water was half clean, half turbid with no typical blackwater fish. I assumed that somewhere upstream the locals were burning down the forest and digging canals for oil palm.

Sadly, we also discovered that the only known swamp for *Betta burdigala* had been partly destroyed, in just 6m from my last visit, by illegal wood cutting.

Four days later, Team Borneo joined us to take us to his secret location in the traditional distribution area where he had caught hundreds in 2012. Again, we found that the environment had changed dramatically; the original forests had been replaced by oil palm and the original black water river was now a half-dry muddy stream whose water was led into irrigation canals for the oil palm. The huge colony *of Cryptocoryne bankaenensis* downstream was also partly destroyed due to the poor water condition and the water depth had dropped to just 30cm.

We were now led to the area of the mysterious eastern type of *P.deissneri* where the rivers had already been polluted by tin mining 10 years ago. Now the remaining forest had been burnt down to build houses. Although we found a huge swamp a few km away near another big oil-palm farm, no *P.deissneri* lived there.

We confirmed the boundary of the current distribution of *P.deissneri*, they are limited to the extreme upstream areas. Turning back to the small branches in the upstream areas we found two more small habitats; the trouble is the habitats are all fragmented and already partly affected by human activities. The rainforest and associated swamps are too small and the original black water has been turned clear, the fish struggle to adapt and the population density is therefore low.

One of the new habitats is a blackwater swamp hiding an untouched rainforest. It is the only remaining blackwater swamp habitat of *P.deissneri* that we have discovered. The fish from such water conditions show a magnificent blue colour, like a sapphire, after capture.


© Jianhui Dai


© Wentian Shi

Six months later I returned with team mate Dai, to assess the condition of the habitats and in just that short time, one of the newly discovered habitats of *P.deissneri* had been burnt down. The illegal wood cutting also continued in the habitat of *B.burdigala* and the water level was no more than 10cm. The only hope was the forest deep inside, which the local people had not yet touched.

We also checked the habitat of *P.bintan* which was also in danger; people were building a house beside the habitat and constructed a wooden water gate across the river. The population of *P.bintan* had dropped significantly- none could be found below the water gate and only a few from the upstream area. We therefore searched further into remote areas along the river system and found a huge blackwater swamp in perfect condition and with a very high population density.

In the past 2 years, I have visited Bangka 4 times. I have witnessed the dramatic environmental degradation. It took nature millions of years to create the fabulous biodiversity in Banka, it might take just a few decades to lose it forever. What can we aquarists do to prevent such a tragedy ? I think the best answer is to preserve the habitat from human interference by purchasing it from the local people. For example, a tiny piece of private land has been purchased from a Japanese friend to protect a *Betta* species permanently. This is also the aim of the Parosphromenus project- to evoke public attention and establish conservation areas for these species.

Special thanks to:-Parosphromenus Project and Peter Finke, Tean Borneo and my team mates JI, Yohan and Dai, Jianhui.

The forest beside one of the newly-found habitats of *P.deissneri* has been burnt down in 6 months

RECENTLY DISCOVERED -THE DECADES LOST LIQUORICE GOURAMI FROM AYER HITAM

Martin Hallmann (text and additional pictures:- pictures of the new *Parosphromenus* sp. Ayer Hitam and of the locality by Mohd Ilham Norhakim Lokman)

Parosphomenus sp. "Ayer Hitam" documented by Hans-Joachim Richter and previously by Dr. med. Walter Foersch was lost until recently. It was held in the 1970s to be (a color form) of *P. deissneri*. H.-J. Richter

We knew that it existed, but since the 70s no more habitats of this *Parosphromenus* have been found. In 1970, Walter Foersch was looking for liquorice gouramis in Western Malaysia through Dietrich Schaller, after he had previously received a single magnificent gourami of indefinite type and origin as an accidental bycatch from the trade. Schaller, after a long search and support for possible sites by Eric Alfred (University of Singapore), found magnificent gouramis in a ditch near Ayer Hitam in the federal state of Johore in the south of West Malaysia. He brought them to Walter Foersch in Germany, who thoroughly studied this species and its peculiar courtship and reproductive behavior. This knowledge, collected by Foersch, would inform us about their appropiate maintenance and reproduction - decades later, when wild Paros brought by IGL travellers became available .

Foersch called the *Parosphromenus* of Ayer Hitam in 1972 *P.deissneri*- the species from Bangka- for at that time no-one suspected how well-distinguishable types and forms of this genus existed, if you only looked carefully enough. Today we can count 20 described species. The assignment to *P. deissneri* was a crutch and in retrospect an error, but no-one could have imagined today's discoveries.

After the new description or the determination a neotype of *P. deissneri* in 1998 by Kottelat & Ng our well-researched *Parosphromenus* remained

nameless and systematically baseless. In addition, the species descriptions of other forms in West Malaysia by Kottelat & Ng in 2013 still gave us no clue as to what species we had before us (in our tanks).

Parosphomenus rubrimontis

One of the unclear forms of *P.* cf. *rubrimontis*- one of the *Parosphomenus harveyi*-complex

Parosphromenus alfredi Male from Sedili

Parosphromenus tweediei wild caught male from Pekan Nenas Near Pontian

The two authors mentioned that Schaller had collected a few more finds from the region around Malacca, but attributed these species in the rewriting of *P.alfredi*, *P. tweediei* and *P. rubrimontis* apparently because no sufficient material for was available. They attributed P 'Ayer Hitam' vaguely to *P.tweediei* due to the red colouration but this was not really plausible. The *Parosphromenus* of Schaller and Foersch from Ayer Hitam remained an unknown and, in the meantime, after extinction of the species in the aquarium, a phantom from the late 1970s.

All we knew was that there had been a *Parosphromenus* around Ayer Hitam, where nature has since become a vast area of agriculture and settlement. All attempts to find this, however, were in vain. Also my random tests in the years 2004 and 2009 were unsuccessful: no nearly suitable waters could not be found. In 2017, we (Peter Beyer, Michael Scharfenberg, Martin Hallmann) along with Zahar Zakaria - led by Mohd Ilham Norhakim Lokman – explored in the sphere of influence of apparently suitable creeks, finding *Betta persephone*, *Betta coccina* and other

blackwater fish, but just no *Parosphromenus*.

Our Malay and Chinese *Parosphromenus* friends had also to my knowledge so far found nothing in the area between the occurrences of *P.harveyi* in the north to *P. tweediei* in the south along the West Coast. Thus, from the 1980s, many forms became available collected in western Malaysia. Their, essentially color, differences were often only latterly recognized. Most recently, three of these forms described as species by Kottelat & Ng in 2013, after Barbara Brown had already described *P. harveyi* in 1987.

These four species are, among other species, part of the *Parosphromenus harveyi*- species group from West Malaysia:
• *P. harveyi* Brown 1987 described from Batu Arang, today only to be found in Selangor Forest
• *P. alfredi* Kottelat & Ng 2013, from the area from Mawai-Desaru (southeastern finger of the Malay Peninsula). One of the last habitats, Sedili, could actually be already extinguished Beyer, Labyrinth 191).
• *P. tweediei* Kottelat & Ng 2013, from the area between Pekan-Nenas and Pontian (southwestern Finger of the Malay Peninsula)
• *P. rubrimontis* Kottelat & Ng 2013, from the around from Bukit Merah in Perak (northwest of the Malay Peninsula)

In addition, we know of two kinsfolk separated from Western Malaysia:
• *P. nagyi* Schaller and
• *P. paludicola* Tweedie.

We always suspected that in western Malaysia yet other forms would be found, which would have to be described as new species because they were always appearing in the trade. However, these were not classified because of missing, reliable locality information. Only in 2015 Hendrik Wimmer & Jens Kühne discovered a new *Parosphromenus* north of the distribution area of *P. alfredi* in the nature reserve Endau Rompin which is not identical to *P.alfredi*.

Norhakim, our friend, who accompanied us to the last intact biotopes on the south west coast has now made a truly sensational find with his friends: the rediscovery of a form already believed to be extinct. The locality, according to Norhakim's statement, is apparently between Ayer Hitam and Batu Pahat. The latter is a faceless big city, which I passed through several times, but never had the idea to research after *Parosphromenus* here. As you can see, 10 or 15 km further on- it looks completely different. And so today, in 2018, almost 50 years after the discovery of the aquarists' pioneer *Parosphromenus* by Dietrich Schaller, our active friends have found the lost P.sp. "Ayer Hitam" again: some Kilometers from Ayer Hitam in front of Batu Pahat in one wide drainage channel, which brings large quantities of black water from the interior .

Paroshromenus sp. „Ayer Hitam“ in the Aquarium

Location of the rediscovered Paroshromenus sp. "Ayer Hitam" in a drainage channel between Ayer Hitam and Batu Pahat

Mohd Ilham Norhakim Lokman

I thank Akim and his friends for the great news, and for taking the impressive pictures of the locality and the wild catches and allowing us to use them here. It should now be finally clear that P. sp. Ayer Hitam is not identical to *P. tweediei*, but that it is an undescribed species of the *P. harveyi* species group.

Someone with whom I often meet and have spoken about the location of the lost Aquarists' *Parosphromenus* from Ayer Hitam is IGL honorary member Dietrich Schaller, who collected this *Parosphromenus* with much effort in 1970, and provided it for Walter Foersch. I greet him warmly and hope he will be happy with us.

Literature

Finke, P. & Hallmann, M. 2013. Prachtguramis, Juwelen des Urwalds in der Natur und im Aquarium. Aqualog Verlag Rodgau, Zum harveyi-Formenkreis – oder: Welche Paros hatte Foersch? 89-91.

Foersch, W. 1974. Beobachtungen bei der Zucht von Parosphromenus deissneri. DATZ 27(10), 338-343.

Foersch, W. 1974. Beobachtungen bei der Zucht von Parosphromenus deissneri (Bleeker, 1859) II. DATZ 27(11), 372-374.
Foersch, W. 1977. Ein Labyrinthfisch mit überraschungen... Parosphromenus deissneri. Aquarien magazin 11(3), 113-1 18.

Hallmann, M. 2013. Prachtguramis – ein komplexes Thema - Teil 5: Unklare Formen im Parosphromenus harveyi-Formenkreis (Stand Januar 2014) Der Makropode 36. Februar 2014, 15-20.

Kottelat, M. & Ng, P. K. L. 1998. Parosphromenus bintan, a new osphronemid fish from Bintan and Bangka islands, Indonesia, with redescription of P. deissneri. Ichthyol. Explor. Freshwaters 8(3), 263-272.

Kottelat, M. & Ng, P. K. L. 2005. Diagnoses of six new species of Parosphromenus (Teleostei: Osphronemidae) from the Malay Peninsula and Borneo, with notes on other species. The Raffles Bulletin of Zoology, Supplement 13, 101-113.

Richter, H.-J. 1977. Parosphromenus deissneri. Der Zwerggurami, ein seltener Labyrinthfisch. Aquarien Terrarien 24(3), 73, 92-94, 1o8.

Richter, H.-J. 1978. Ein seltener Gast: Der Zwergprachtgurami. Pflege und Zucht von Parosphromenus deissneri. aquarien magazin 12(8), 384-389.

Schaller, D. 1985. Parosphromenus nagyi spec. nov., ein neuer Prachtgurami aus Malaysia (Vorläufige Mitteilung). DATZ 38(7), 301-303.

THE THIRD INTERNATIONAL MEETING OF THE PAROSPHROMENUS PROJECT organised by Helen Schoubye and hosted by Andrea Swatman, team manager of the aquarium, occurred in Chester Zoo's Cedar House in September 2019.

A select but privileged group heard first about the project itself from Benjamin Wilden; with up to 600 members but perhaps only 5-15 active breeders. Its ambitions include captive maintenance of the species of course but is also keen to get involved in and contribute to conservation projects in their country of origin.

An example of how this could occur using the example of a Chester Zoo project in Mexico with endangered live-bearers indicated some of the complexity of the ambition with a starting fund of ca £20,000. There, carried out largely with local (eg University) collaborators, captive breeding started on a small aquarium scale, graduated to breeding and maintenance in concrete vats before re-introduction could be considered. Assessments of parasite load of the fish were made, the non-natives in the reintroduction locality had to be reduced and pilot-scale studies made of enclosed populations in the chosen locality. Full re-introduction was made, integrated into local traditions/ ceremony and of course long-term studies of water quality and populations had to be continued thereafter.

Encouraged by the songs of the nearby Gibbon, Andrea then outlined studies on *Parosphromenus* cultivation at the aquarium and how, in the form of *P.linkei*, they had been incorporated into the rain forest tank display in the new building which had tragically been recently damaged in a fire thought to originate in the aquarium area.

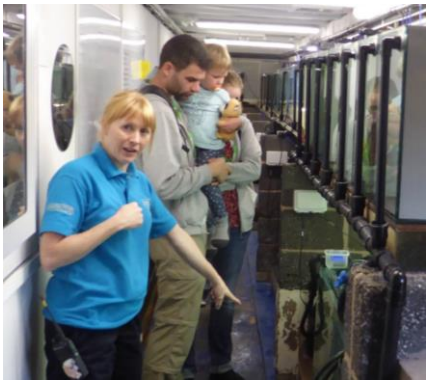
This presentation led naturally into a discussion of Paros cultivation guidelines that would be followed by other interested or participating zoological collections. The intention is to produce a protocol which can be assessed by the Paros group for practicalities based on their collective experience.

In the afternoon of the first day, we were treated to presentations of Paros habitats separated by nearly 40 years, which illustrated the threats to the genus. Allan Brown told of the discoveries made, travelling on gravel roads, by him and his wife, Barbara in Peninsular Malaysis and Sarawak in the early 1980s. This included the discovery of *P.allani* near Sibu and a similar species, on the road from Kuching to Lundu (Sg Stunngang), distinguished by blue and brown anal fins respectively. In 3 trips around

Malaysia, they had discovered *P.nagyi*, *P.rubrimontis* and *P.harveyi*, before they were described, as well as *P.paludicola* in the north east.

Following this, we were privileged to have a live presentation via the interweb from Wentian Shi about his contemporary rediscoveries in Malaysia and recent explorations in Kalimantan in the late 2010s with collaborators Team Borneo, Yuhan Ji, Mohd Lokman and Leo Dai. In particular there were interesting observations on *P.filamentosum* which is more of a species group than a species. The original type came from Sg. Barito , near Banjarmasin with a red center to the caudal, dorsal base and anal fin, but no significant blue band beside the red area. Four main river systems were explored in a range of ca. 400 km from the east boarder of Kalteng to the west of Palangkaraya, the easternmost being sp. Ampah with no red on unpaired fins, but bold blue bands. However, exploring the original area for sp Ampah they found huge, up to 4.5 cm fish, some with only blue and black and bold bands. others with extra red color in caudal center and thin bands, similar to typical *P. filamentosus*.

The next morning, we visited the Chester Zoo aquarium, where many of the exhibits had associated conservation projects, including the Blind cave fish and Mad. Cichlids, recently featured on Ch 4's 'Behind the scenes at the Zoo'. Behind the scenes at the aquarium, we discovered some of the breeding projects, livefood and water cultivation and a small collection of various Paros.sp, including *P.linkei*, *P.paludicola* and *P.phoenicurus*. After a few words with the Aye-ayes in the 'Tropical Realm' I headed home, inspired to set up my Paros in more glamorous surroundings.



https://www.facebook.com/ParosphromenusProject/

https://www.parosphromenus-project.org/en/

PAROSPHROMENUS ATTENDEES :-From left back row : Martin Zuber, (CH), then Allan Brown (GB), Benjamin Wilden, (D), Dave Armitage, Jack Irish, Harry Shields and John Smith (all GB) Front row from left Helene Schoubye Johansen, (DK), Marlyse Zuber (CH), Andrea Swatman (Chester Zoo, GB), Klaus Hartel, (CH), Kevin Marshall (GB) and far right it is Michael Baltzer (Shoal, GB).

THAT'S THE WAY TO DO IT - AN ALTERNATIVE CULTURE METHOD FOR GRINDAL WORM

Kevin Marshall

Introduction

As the choice and quality of dried and frozen fish foods it is easy to overlook the importance of feeding live foods. Those of us however who specialise in those fishes that are reluctant to take live foods such as *Badis Dario* and Parosphromenus sp. have little option but to feed our fish on livefood. If we want them to flourish. In that respect having the ability to raise and provide a consistent supply of livefoods is important.

Worms of the genus Enchytrae (White worms and Grindal worms) have long been valued to provide a ready source of livefood for our fishes.and their culture method have been the subject of many articles in fishkeeping magazines and journals. Here is what H W Castle wrote in the 1938 December issue of the

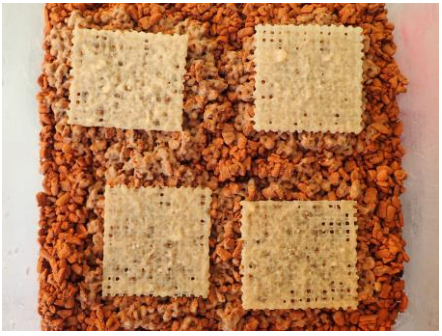
Aquarist and Pondkeeper "*The most successful way of keeping a steady supply of livefood is by means of a culture of Enchytrea. These worms can be bred in the following manner . First a box is filled with a compost of equal parts of silver sand. peat and loam The compost must be firm and very slightly damp to the touch. Next a hollow is scooped out and a few Enchytrea placed into it. A paste of sour milk and biscuit is then prepared and placed on a sheet of glass . This is then placed faceside downwards on the compost.. The whole is then placed in the dark. When some of the worms are needed they will have found to have collected at the surface of the compost against the glass. A culture*

such as this will provide a constant supply of livefood for months and sometimes years without renewing the original supply of worms"

Over the last 80 years it would appear that little has changed and that a compost based medium is still the preferred method for the culture of these worms. I myself however have always had an interest in the alternative methods culture that come that come to light every now and again. This most likely being because of my inaptitude at being able to maintain a compost based culture successfully. There had to be an easier way that did not have me dealing with soil mites and cultures crashing before I had chance get a good harvest of worms in return for my efforts. That easier way for me came along in 2015 at the inaugural meeting of the Parosphromenus Project when I learnt about a method that used clay granules of the sort used in horticulture particularly hydroponics and orchid culture. These granules effectively replaced the soil based compost used as a growing medium.

Method.

To set up a culture I use large plastic sweet boxes (although I am sure any number of different sizes of boxes would suffice and this would depend on the individuals own preferences and needs) into which which are drilled a number of small holes for ventilation. The granulate is then washed to remove any dust and the boxes filled with about 8oz of the damp granulate. I then add the grindal worms which have been separated from their original medium. To feed and harvest the worms I make up my own feed using a cereal based dog food mixer. Porridge oats and red lentils to which is added a small amount of yeast flakes and vitamin/calcium supplement. These ingredients are then ground into a flour/powder using a food processor and a coffee grinder. The resulting mixture is then lightly sprinkled on to small squares of plastic needle work canvas and then misted with a hand sprayer just to dampen it in order to make it more accessible to the worms. To harvest it is then a simple matter to wash the worms from mat into a small container of water and pipette them into the tanks where they are to be fed. If the worms are being fed correctly only a minimal amount of the flour mixture will be transferred to the aquarium and should not constitute a problem if frequent water changes are carried out.



This method has been found to be highly productive and should produce worms on a daily basis. It is of course useful to have more than one culture and I keep four on the go at anyone time, harvesting from one for one week and then rotating the cultures so at to let them recover over three weeks. I have since found out that this practice fits in

nicely with the grindal worms life cycle the generation period (cocoon to cocoon) being about a month at 20 °C.

The cultures require little maintenance other than feed and harvest. They are however so prolific that they will need splitting into new cultures every now and again with fresh granulate. If however you do not wish to do this the culture can be washed to remove the impurities and then strained through a kitchen sieve to reclaim the granulate which will retain enough worms to restart the culture. Of course any worms that are washed out should be harvested by picking out with a turkey baster when they clump together or by filtering through a fine gauze or brine shrimp (Artemia) sieve.

With regard to pests such a soil mites this method of culturing is I find free of mites. My cultures have however been affected with springtails which can also be harvested for livefood.

Conclusion

I find this an easy method to use and have had little trouble in successfully maintaining cultures that provide me with all the grindal worms that I may need. As far as I know feedback from AAGB members who have been introduced has been favourable and I would therefore definitely encourage any one who has in the past had mixed success in more traditional methods to give it a go.

Reference - The Aquarist and Pondkeeper incorporating The Reptilian Review - December 1938

ANABANTOID ASSOCIATION OF GREAT BRITAIN

Hon. President; J.Dawes Aquatic consultant
Secretary; and Member's Weekend;
Mrs C.Webb, 19 Chiltern Crescent, Spotbrough, Doncaster DN5 7PE
cjlabyrinth@tiscali.co.uk
Chairman & Judging Panel; K.Webb,
19 Chiltern Crescent, Spotbrough, Doncaster DN5 7PE
Treasurer; K&E Smith via Secretary
Merchandise; Vacant c/o Secretary
Information Officers; Paul Jordan,
pauljordan179@gmail.com
Colin Dunlop, crdunlop@gmail.com
Editor: D.M.Armitage, 1a, The Orchards, Westow, York YO60 7NF
01653 618971
westowfish@yahoo.co.uk
Web page A. Pinto : **http://www.aagb.org/**

SUBSCRIPTIONS (Pounds sterling)
Overseas/Family £15 Individuals £10.00
OAP/Under 16 £5.00

Front Cover: The actual *P. deissneri* (only 1998 re-defined by Kottelat & Ng comes from Bangka and looks very different from west Malaysian species (Photo by Horst Linke)