

# Livebearer News

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BRITISH LIVEBEARER ASSOCIATION



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**Editorial** by Paddy Davies

Welcome to issue 35. We have now had the Spring auction in Corby, I enjoyed myself hugely, despite the roadworks on the way! Although not a massive turnout I

felt the variety of fish in the auction was great, it was nice to see lots of people bringing fish to be auctioned, rather than just a few.

It is a bit of a developing trend that can be seen at other auctions as well, the sellers are almost outnumbering the buyers, while this may bring down prices for some species it also has benefits as it means that we have a large number of skilled breeders with enormous amounts of experience out there, many of which are also more generalist than before. It is rarer to find a livebearer only fish house, these days it seems.

It is also good to see the sales and wanted section growing in the magazine, although it would be great to have a few more adverts, so please email me your lists.

At the 2011 convention last October we had a great lecture from Alex Cliffe of London Zoological Society about the conservation work they were doing with Livebearers and Killifish. Afterwards it was proposed that we work together, after a bit of organising, Nigel Hunter went down on behalf on the BLA to give them some species to work with. You will find his first report on page 4, if you would like to be involved in this more please contact Nigel for more info.

Other articles include several new articles from our members, including friendly guppies and spotted platies, we also have an article by James Langhammer on Goodeids originally published in 1976 that has been revised recently – a great introduction to the group if you are unfamiliar with them.

The next issue will be available at the end of September 2012, just before the 2012 convention, details of which will be released shortly.

I hope you all enjoy reading this edition, please do email your comments, suggestions and offers of articles to me.  
Paddyd99@gmail.com

## **Chairman's Report** by Chris Cheswright

The weather got warm and I turned the heating off in the Fish House, I even had the door open when I got home in the evening (it was warmer outside- the wonders of insulation). Then for about the past month the temperature dropped and we have caught up on the rain. Even the tomato plants in the greenhouse have only just started growing at a sensible speed. It just shows how unpredictable things can be. In the wild this must be a problem at times for the fish, if the rains do not come they may be stuck in small puddles, when we caught the *Brachyrhaphis hartwegi* that are in the hobby today, they were in isolated pools in a river bed made up of a light coloured sand. If the rains

come and it floods how do these fish manage to survive or stay put? I can remember catching *Xiphophorus helleri* in what amounted to mountain streams with huge boulders that must be a raging river when it floods.

Since putting a solid roof on the fish house, after every other roof having let in some daylight, I am a little concerned on how to provide the fish (and plants) with what amounts to a natural pattern of light and temperature changes. This used to happen before and the lengthening of the daylight used to stimulate the duck weed growing (at least that does not happen now). I assume it would be possible to computer control the lights and heating as in a greenhouse to grow crops or a high end marine tank however this would be hugely expensive and require some expertise in electric circuits.

However as well as stimulating the duck weed changes in temperature and day length also impact on the breeding of some fish. Have you noticed how many more young appear in the spring? My concern is obviously that having no natural light may impact on some natural cycles the fish require in order to breed, etc. It would be interesting to hear from those of you out there who have natural daylight and those who do not to see if there is any impact on the fish. If you have no natural daylight do you adjust the lights or temperature during the year at all?

This is our Association it would be good to hear the view points of more of us and to spread those words of wisdom on how we have been successful with some species while we may fail with others.

## **London Zoo Visit** Text and images by Nigel Hunter

At the BLA convention in 2011 we had a presentation from Alex Cliffe from the Zoological Society of London (ZSL) on their Fish Net conservation project during which Alex showed us a hit list of species they were looking to work with.

Fortunately we were in a position to offer a few species to them, we communicated regularly, and by the time we were able to arrange a date that suited everyone involved 6 months had flown by.

The 8th may was finally agreed so with a few weeks notice I was able to make arrangements to gather the fish together. Gary Randall and Alan Rollings were able to help by supplying fish with Alan just returning from the ALA Convention and kindly brought some *Xiphophorus couchianus* from their SMP back with him whom he kindly donated to ZSL. Gary supplied some *Ilyodon whitei* and I managed the *Aphanius sp.* and *Valencia sp.* killifish.

On the morning of the visit I left home to take the 1 ½ hour drive to the Zoo. 2 ½ hours later arriving at the aquarium entrance to be met by Alex. The fish were deposited in the boiler room of the aquarium and I was taken up to their office to meet the rest of the team Brian Zimmerman (Curator), Rachel Jones (Team leader) and of course Alex. After the customary cup of tea Alex took me down to the aquarium where he started to acclimatise the fish to their new tanks; while the water was slowly mixing he took me on a guided tour behind the scenes.



There were 3 main areas where they had the fish breeding facilities, first was the boiler room where our fish were to be quarantined for 30 days, all the tanks were separately filtered off system. In this area they had the native seahorse breeding set up both *Hippocampus hippocampus* and *Hippocampus guttulatus*; where I have to say they had been rather successful with them breeding and sending out hundreds of seahorses to other Zoo's and institutions over the last 2 years.



They also had large 1000 litre fibreglass tubs with viewing windows. They house species such as *Girardinichthys viviparus*, *Cyprinodon alvarezi*, *Aphanius transgrediens*, *Characodon lateralis*, *Cyprinodon longidorsalis* and *Valencia letourneuxi* (Corfu). Then we went up to the passage way above the display tanks where they had more tubs, in one was a large colony of *Skiffia francesae* numbering in the hundreds. Also *Cualac tessellatus* more *Cyprinodon alvarezi* and *Cyprinodon veronicae* and *Aphanius dispar*.



Looking down on the display tanks you get a better idea of size than looking from the front, the tanks are much larger than they look most of the tanks are using plant filters very similar to hydroponics where water is air lifted through the plants and they take out nitrogenous waste. Here they also had a large RO system capable of producing up to 3000 litres a day. They also use UV lamps on some of their tanks which have been shown to be *Mycobacteria* positive as they believe the UV radiation suppresses this bacterium.

Water changes are done weekly but percentages and ratios of tap water and RO water are governed by the results.

Then you go down and through the viewing hall to the third room this was more traditional with large glass tanks on racks housing *Ameba splendens*, *Ataeniobius toweri*, *Chapalichthys pardalis* and *Poecilia reticulata* by the hundred. This room has a viewing window from the public side looking in so it was nice to see

mainly livebearers there, other fish there included tetras (*Hyphessobrycon pittieri* and *Hyphessobrycon rosaceus*) that had been bred there and several killifish such as *Rivulus marmoratus*

From there we went into another corridor behind a row of public aquariums where they had a white board with the numbers of each species on all were increasing from the last count, so their methods seem to be working each tank has it's own board with inhabitants details, water conditions and feeding regime a wide variety of live food such as fruit flies, white worms, micro crickets and Daphnia. Plus three type of flake food and a selection of frozen food such as *Artemia*, *Daphnia*(collected by the fearless keepers from the moat around the Giraffes), Bloodworm and Cyclops. They also incorporate a fast day (Sunday) as these species in the wild would not come across such an abundance of food each day!

Also on the board is a four digit number for record keeping. This number can be searched on the database bringing up all the data for that particular species.

Along this corridor were several aquariums with different fish in names escape me but they weren't livebearers so I'll forgive myself at the end of the corridor was a huge UV filtration system the water quality is checked regularly to keep it at it's best as you know get the water right and you will stand a better chance of success.

All this is done by just 6 members of staff and only 3 on duty at one time. The other side of the filters is a large derelict area used for storage this area is going to be the new Fish Net facility which will house all the Critically Endangered and Extinct freshwater fish species.





.As we don't want to be able to see them only in books and paintings Work is hopefully starting later in the year to clear the area and basically start with an empty area that needs to be fitted out as a conservation centre. Each room will be temperature controlled tailoring the parameters for that particular species. Then the hard work of funding the project really takes off.

***It is important to add to the end of the report the importance of you and the BLA being involved leading up to the Fish Net facility. Without your help in sourcing species and providing contacts, it will be very difficult to follow this program through without you guys! This comment is endorsed by me, Rachel, Brian and also the Directors of ZSL. So a big thank you for the work you have already done and I am hoping this is the start of something that should have been done many years ago!***

## **Members sales and wanted:**

### **Trevor Williams:**

Available fish:

*Limia tridens, Limia nigrofasciata, Limia melonagaster, Limia zonata, Limia sp.tiger, Girardinus falcatus, Phalecerous caudomaculatus, Xiphophorus multilineatus, Xiphophorus milleri, Poecilia salvatori(liberty) , and Poecilia butteri*

Please email: [trevsfish@fishthw.plus.com](mailto:trevsfish@fishthw.plus.com)

### **Clive Hawkins, Bristol:**

Available fish:

*Poeciliopsis gracilis media luna,*  
*Xiphophorus helleri 'Golden Stream, Belize'*  
*Ameca splendens*

Wanted:

Female *Phallichthys amates amates*  
male *Brachyrhaphis terrabensis*  
male *Belesonox belizianus* female  
*Xiphophorus nezyhuacotyl* pair or  
trio *Xiphophorus variatus*  
pair or trio *Xiphophorus maculatus*

Email: [clivehawkins52@yahoo.co.uk](mailto:clivehawkins52@yahoo.co.uk) or mobile 07900218170 home 01179638478

### **Clive Walker: available fish:**

*Illyodon xantusi* & *Chapalichthys pardalis* both at £4.00 a pair or less.

Email: clivewalker076@gmail.com or call 07780 996557.

## Do Guppies make other fish happier?

Article and pictures By Clive Walker

When I started fishkeeping, at the age of ten, the first fish I had were Guppies and Angel Fish. I had the Angels for a long time, can't remember what happened to the Guppies.

Perhaps they made the Angels happy?

Moving on, some years ago I was unexpectedly given two bags of wild guppies (Rio Negro & Rio Caucanu). One lot went in with my *Xiphophorus meyeri* from which I usually obtained only two or three fry a month, if I was lucky. A few weeks later I had twelve or so surviving fry. So what was going on? Were the guppies distracting the *X. meyeri* from eating their own young or were the 'dither fish' causing the *X. meyeri* to be less nervous or stressed but 'happy' instead. The tank was a heavily planted 18x12x12 6ft off the ground, I hardly ever saw the Meyer.

The guppies were of course a different matter, begging for food every time I went in the room. Did their behaviour affect the *meyeri*? Yes it did, I think I saw more of the *meyeri* after the addition of guppies. Moving house upset the *meyeri*, though I kept them going for another three years. I lost the last one a year ago, the last brood had all died for no apparent reason over a few days when six weeks old.

Back to guppies. Two years ago the fish house went down to 50°f while I was on holiday this killed the wild guppies, and my *X. multilineatus*, but all the other Livebearers survived. So no guppies in the fish house, but this was to change later that year at the Bristol Show. I bought six bags each containing about 15 juvenile wild type guppies. There were only a few males starting to show a bit of colour but they had the wild look that I like. (I think they were bit wild about being sold in sandwich bags!) When they grew a few were different, females with colour in the fins and red males, I sold these at the club. By removing the 'non wilds' the group is now seems to be breeding true (I give their collection location as Bristol Show 2010).

I keep a number of Goodied species. I see much more of the *Girardinichthys viviparus* since the addition of guppies to the tank. I have had these for some years and they have always kept hidden away. I recently set up a second tank for *G. viviparus* and the pair in there are often on view especially the male. The same with *Allotoca dugsei* though not with *Chapalichthys encaustus*. The fact

that I only have a male *encaustus* may be influencing this. The *Allotoca zacapuensis* come charging up with the guppies when food goes in.

They were much more timid previously.

I've not seen *Z. Tequila* attack guppies but guppies are not happy with the Tequila so the Tequila have themselves for company .



Bristol 2010 Guppy



Pair of *Z. quitzeoensis*

Guppies are not bothered by *Z. quitzeoensis* however. I don't get many, if any, guppy fry surviving in the Goodeid tanks. There are various species of more aggressive Goodeid where I wouldn't keep guppies in the same tank.

*Chapalichthys pardalis* took chunks out of the fins of the Corys that used to share their tank. *Pardalis* seem happy enough fighting each other, non stop, but little damage is done.

I also have Guppies in with *X. Nezahualcoyotl*! These were very nervous at first but settled quickly after the introduction of some small Guppies. There is a good size brood of Nezi fry as well as guppy fry in the tank.

The mixed background of my 'Bristol 2010' guppies shows itself with the very large size the females attain. I wonder if these large females are a threat to Goodied fry. Guppies are voracious feeders perhaps with a bit of a 'bite first' attitude.

So larger females may be better left out of Shoal breeding tanks.

I like Guppies and have several hundred at the moment. I believe there's even a club just for Guppy fanciers! <http://www.fancyguppies.co.uk>, Fancy that.

## Data Protection Act

In order to comply with the requirements of the Data Protection Act, we need to inform members that their name, address, e-mail address and telephone number are being maintained on a database, the purpose of which is for the distribution of the Association's magazine and to inform members of forthcoming events. This information will not be provided to any other organisation for any purpose whatsoever without prior consultation.

The Association agrees to remove any details at a member's request.

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All views expressed herein are the opinions of the contributor and do not necessarily reflect the views or opinions of the BLA.

The print date for the next issue is 30th September 2012, could all contributors please ensure that articles are provided to the Editor by the end of August 2012.

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# The Lost Treasure of the Aztecs

by James K. Langhammer

(This is an article originally written in 1976 and published in TROPIC TANK TALK of the Greater Detroit Aquarium Society and in LIVEBEARERS of the American Livebearer Association. It was revised in 1982, in 1999, and again in 2007. It is the first part of a series by the same title.)

History books tell us that in the early 1500s the Spanish Conquistadors destroyed, as a political entity at least, the great nation of the Aztecs in the central highlands of Mexico. In their relentless search for gold and other treasures, the Spaniards pillaged the American cultures until one by one most of them fell beneath Spanish domination. Yet history also alludes to the fact that the New World's ultimate treasures as envisioned by the Spaniards were never found. Why? Where were they hidden - and by whom?

Perhaps, the real treasures of the Aztec empire were hidden to the Europeans by their own unconsummated greed, and have continued so to this day! Gold and gemstone ornaments were probably more beautiful than valuable to the Aztec people whose artefacts reflect the great majesty of the natural world around them.

Part of the beautiful baubles of the everyday world of the Aztecs still shimmer in the hot sun of the Tropic of Cancer, vicariously reflecting the Sun-god's radiance off their animate flanks in a brilliant blend of opalescence and pigmentation, and STILL are unknown and unappreciated by the modern world! - the goodeids, a fascinating family whose livebearing species are restricted to Mexico. Equally fascinating is how habitat destruction has impacted the less colourful EGG-LAYING goodeids of the genera *Empetrichthys* and *Crenichthys*. These two ancestral remnants are the last living examples of the early evolution of the family Goodeidae. Both egg-laying genera are critically endangered and really need hobby exposure. But be aware that since they are US natives, they cannot be legally acquired nor husbanded by private aquarists under our current laws.

The livebearing subfamily Goodeinae is restricted to the ancient Aztec domain of west-central Mexico. Using the state capitals of Durango, Colima, Morelia, Mexico City, Queretaro, and San Luis Potosi as boundary references, the total range of the subfamily which consists of approximately 36 species in 17 genera can be roughly circumscribed.

Goodeids are wonderfully interesting fishes, I don't believe any amount of paraphrasing on my part could improve on what John Michael Fitzsimons (1972) says about the livebearing members of the family:

The Goodeidae comprises a wholly Mexican family of viviparous freshwater fishes represented by 35 or more species largely restricted to the highlands of Mesa Central. Its focus of abundance is in the Rio Lerma basin where it is the dominant family of fishes (Miller and Fitzsimons, 1971).

“Goodeids are generally small; members of two genera, *Alloophorus* Hubbs and Turner and *Goodea* Jordan, attain a length of 200 mm, but most grow no larger than 100 mm. They live in a variety of habitats, ranging from deep spring-fed pools to shallow riffles. Some are lake dwellers: others abound in irrigation ditches that may have only a few inches of water. Their body form often reflects habitat type. Certain river and stream species, such as the *I Eigenmann*, are swift swimmers with slim, streamlined bodies and large caudal fins. In ponds, lakes, or quiet stream pools, deep-bodied forms, such as *Skiffia* Meek, are slow moving and maneuver easily in dense vegetation, sculling with the pectoral fins in a manner reminiscent of many resident coral-reef fishes. Members of the genus *Allodontichthys* Hubbs and Turner look and behave like North American darters (*Etheostomatinae*), are long-bodied bottom dwellers, and are found only among the rocks and boulders in shallow riffles. Goodeids include all consumer types: carnivores with conic teeth and a short gut, *Alloophorus*; herbivores with generalized bifid teeth and a long coiled gut, *Ameca* Miller and Fitzsimons; or omnivores with variable teeth and gut form, *Xenotoca* Hubbs and Turner, the feeding habits of which range from nearly completely carnivorous to completely herbivorous at different localities.

“The unifying features of the family are related to mode of reproduction - internal fertilization and live birth. The distinctive modification of the male anal fin, presence of an internal muscular organ of apparent reproductive function in the male, structure of the ovary, and the development of trophotaenia in embryos distinguish the Goodeidae from all other cyprinodontoid fishes. The first six or seven rays of the male anal fin are crowded, shortened, and often separated from the rest of the fin by a distinct notch; they probably aid in insemination. The anterior anal rays of the male have been described as a “gonopodium” (Turner, Mendoza, and Reiter, 1962), a term first applied to the elongate male anal fin of the poeciliids, but this term may be a misnomer for goodeids since the role of the anal fin in sperm intromission has not been demonstrated (Miller and Fitzsimons, 1971). Goodeid males also have a short, highly muscular tube connecting the sperm ducts to the genital opening; this structure has been termed a “pseudophallus” (Mohsen, 1961, 1965). It is said to expel semen forcibly or to become everted and applied to or placed into the female's genital opening, but, as with the “gonopodium”, its function has only been surmised and not demonstrated. Females have a single median ovary formed from the union of lateral organ rudiments, the fused internal walls of which form the median septum. Yolk is resorbed early in embryogeny and its nutritive function is assumed by placenta-like trophotaeniae, rosette or ribbon-like growths which extend from the

anal region of developing embryos in all but one species (Turner, 1933, 1937).” - end of Fitzsimons quote.

Since 1972 when Fitzsimons wrote the above, one major systematic change affecting his words was Parenti’s 1981 revision of the family Goodeidae to include two egg-laying genera within a new subgenus Empetrichthyinae. Currently I believe all taxonomists accept Parenti’s conclusion that the egg-laying genera *Empetrichthys* and *Crenichthys* are indeed similar to what primitive goodeids must have been like and that by including them into the family its range is now extended north of Mexico’s boundaries.

My primary purpose in writing this account is to introduce to aquarists several species of the live-bearing goodeids and my impression as to their value as aquarium fishes.



Male and Female *Characodon lateralis*      Photos by Chris Cheswright

The first species I'd like to mention is my unquestioned favourite - the Rainbow Goodeids of the genus *Characodon*. I know of few fish with more color in wild stock than the Rainbow Goodeid; with judicious selection I believe this genus can afford aquarists with at least as many colourful strains as have the platies and swordtails. Males may be primarily red with yellow, green, black, and brown markings. It is true of all goodeids and many fishes generally that body pigmentation may be enhanced by of other fishes seems to occur if the goodeids are not regularly fed well. Generallinadequately fed and maintained; thus multiple generationsif the fish are viewed in poorly y goodeids do not cannibalize their own young unless the parents are lighteiridescence reflected from light sources back to the viewer - resulting in visual splendor not seen with other fishes -although as with all goodeids some fin-nipping are easily exhibited together. Goodeid populations should d situations. Rainbows are relatively peaceful be housed separately, however, since some interspecific hybridization has been documented (Fitzsimons, 1972).

Rainbows can grow to 60 mm total length. Like all goodeids, they are not fussy eaters; although morphological details indicate many goodeids are adapted to herbivorous diets, my experience has been that they all relish and even prefer living animal foods.

The Rainbows are the most northern known viviparous goodeid and occur in springfed streams near Durango. Perhaps, their occurrence in the clean artesian waters explains their extreme inability to tolerate “old” water - they MUST have frequent water changes to offset the acidifying, polluting effect of metabolic wastes. In my Detroit water with pH of about 7.2 and 120 ppm of carbonate, a downward shift in pH can quickly become fatal to goodeids. I believe hard, alkaline waters are much more to their well-being.

My partiality to the Rainbow fortunately doesn't diminish my opinion that the best of all aquarium goodeids is the Butterfly Goodeid, *Ameca splendens*. Like a giant *Nothobranchius*, the Butterfly's beautiful colors and frenetic activity will endear it to most hobbyists. The female Butterfly is basically a black and brown variegated version of the male, which displays true elegance. The males have iridescent green flanks which are flashed like a spinning prism as the fish darts around the aquarium. The caudal fin is widespread at all times, providing magnificent contrast between the broad black submarginal band and its wide border of canary yellow.



Photo's Credit to Rit Forcier ALA Photo of *Nothobranchius korthausae* by Ivan Dibble Butterfly Goodeids are large fish growing to 100 mm, with some of the largest newborn babies I've seen among bony fishes - 20 to 24 mm at birth! They are peaceful and seem more tolerant of old water than most goodeids are.

The Blue-tailed Goodeid, *Ataeniobius toweri*, has little to recommend it in my opinion. It is a slender fish growing to 100 mm. On the flanks are two parallel,



horizontal stripes and in the male the caudal fin is a beautiful pastel blue by reflected light. The Blue-tailed Goodeid is sensitive to water quality. It is the most easterly of all goodeids and it alone lacks the well-developed trophotaeniae so characteristic of goodeids; for that reason it was once considered the most primitive member of the family. Recent research suggests instead that the trophotaeniae were lost as *Ataeniobius* evolved from the genus *Goodea*. It is one of the few species in which I cannot see sexual dimorphism at birth; visible anal-fin modification in males seems to occur at about 30 mm

The Green Goodeid, *Xenophorus captivus*, is another that will never be popular. It was my first goodeid and I have maintained stock for over thirty years and freely distributed the fish, but I know of few longterm hobby stocks at present. This is too bad because it is a desert species and due to local irrigation uses, its spring habitats are rapidly being destroyed. It simply will not tolerate old acidic water and dies quickly if neglected. The males have iridescent green bodies and a rather unremarkable cream border on the otherwise transparent caudal fin. One population from Jesus Maria has better colour over all and was only introduced into the hobby in 1998. The species seems to be large at 60 mm.

A colorful species is the Picotee Goodeid, which has a scientific name that is almost longer than its 40 mm adult size - *Zoogoneticus quitzeoensis*. This is an elegant species, very much like the Merry Widow, *Phallichthys amates* (Poeciliidae), in body shape and pattern. The dorsal and anal fins of males are picoted (or bordered) in orange which can be deepened to blood-red if enough carotenoids are fed to the fish; the caudal is colorless. The body of both sexes is boldly marked by large blotches. Behavior is spritely but peaceful.



Photo by Ivan Dibble

A more recent introduction and equally handsome is the Crescent Goodeid - *Zoogoneticus tequila*. It is slightly more robust but differs in fin coloration - its

dorsal and anal fins are bordered by creamy bands and it is the caudal fin which is bordered by red-orange!



Photo Credit to Rit Forcier, ALA

Just as the Mozambique mouthbrooder gave all *Tilapia* (sensu lato) a “black eye” or undesirable status for most aquarists, so also I'm afraid the Red-tailed Goodeid, *Xenotoca eiseni* has adversely affected the attitude of aquarists towards the other Goodeids. The Red-tail is a pugnacious, astonishingly fecund, hardy, and robust species which grows to 80 mm. and seems to quickly wear out it's welcome for most aquarists. Please, however, keep in mind that this fish is a rogue species and not at all typical of the family.



Photo by Ivan Dibble

By contrast, the beautiful Jeweled Goodeid, *Xenotoca variata*, is highly desirable although I am afraid it is destined to be overshadowed by the very similar Butterfly Goodeid, *Ameoca splendens*. The male Jeweled Goodeid has a “crazy quilt” effect of opalescence on its sides - pinks, greens, blues - which can only be appreciated by light reflected to the viewer. The creamy yellow tail border loses effect by not having a contrasting submarginal band. Like the Red-tail, it grows to 80 mm. but seems to be a much gentler and acceptable community fish.

With these not-so-brief and yet extremely superficial comments, I hope I have given you some insight to a relatively ignored and fascinating family of livebearers. For additional reading I refer you to the bibliography below.

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## Morphs or real populations? BY Chris Cheswright

It has been sometime since I went on a collecting trip, 1998 in fact, but a few things harking back to observations there do keep cropping up. One point in particular has been talked about and that is 'what is a wild population?' and how should we replicate that in our captive aquariums? What I am particularly talking about is when we say we are maintaining a wild population- are we really doing

that? As an example *Xiphophorus pygmaeus* is a case in point. Often people ask what the location of the fish they get is- the answer being Huichihuayan or Huichihuayan (yes there is only one location). However many people will have two separate populations because of the yellow and blue morphs being kept separately. Is this a correct way to maintain this species? In the wild (having snorkelled in the location) I can confirm that there are blue and yellow males swimming about in the same water. So naturally these morphs live side by side and therefore to keep the fish in a 'natural' population the fish should be kept as a mixed morph group. What turns out (i.e. numbers of yellow or blue males) I do not know as I have not done it but there are people who do this and as far as I am aware they get both morphs.

Another example is *Xiphophorus malinche*. We were used (back in the old days) to a number of populations with distinct colour patterns. This seemed to be perpetuated from populations from the *Xiphophorus* genetic stock centre in the USA where fish distributed were uniform for a population. However, guess what, in the wild the males are a mixed bunch of colours and patterns. Again these should be kept like this and allowed to breed and produce mixed offspring. This often does not happen because the numbers we deal with in an aquarium are limited and therefore tends towards uniformity. Zoos when maintaining genetic stock deal with larger numbers, if they can, and populations kept in different places to allow out breeding

The main focus of this article is *Xiphophorus xiphidium* that are generally sold according to a morph- crescent, one spot, two spot, etc. However if you trace all of this stock back it originates from a number of collections but only a few sites. Because in the wild these morphs are found as a mixed population. I remember collecting a few specimens at Corona and these were a variety of morphs. Looking back on an article written by Derek Lambert in Viviparous there is some interesting detail that I will summarise here.

Four morphs have been identified; O-one spot; Ct-cut crescent; Cu- upper portion of crescent; C- simple crescent. The Cu morph is our 2 spot and sometimes these will produce Cu, with the lower spot missing. The latter pattern is recessive meaning it can stay genetically 'hidden', but if two Ct fish are bred and this hidden gene is present they can produce fish with the lower spot missing. Breed two Cu fish the result will be Cu only and the two spots would be lost. It is likely if keeping a small mixed population of *X.xiphidium* that it would tend towards the genetic makeup of the dominant features and occasionally produce a recessive type. Hence why you might purchase a pair of 2 spots and then get young with one or no tail spot but should you worry as this is natural.

To add to this there are some other colour patterns that are seen. Some fish appear with blotches on their sides; this is dominant and will be passed to the majority of offspring if both parents have the feature. The final (known) pattern is termed 'Parr' markings where the males get vertical barring on their sides. This was a very common variety a number of years ago and is very distinctive. It reminds me of the original specimens I saw and explains the name of Purple spike tipped Platy- as indeed they used to show a dark purple hue. The Parr markings are never found in females and are most noticeable in the 2 spot form. There may be more colour patterns out there to further complicate this picture.

### **So what should we as hobbyists do?**

Well we should keep populations separate when they obviously are in the wild but perhaps we should keep larger mixed groups to allow the morphs to achieve a natural mix. This may lead to the dominant feature being in the majority but we should not be concerned about that as this happens in the wild too. Fish should then be sold by the location and not as morphs

## **Plea to Members**

The Committee is very aware that we are mostly based in the south of the country, we would like to address this and hope to have events more evenly spread across the UK, particularly further north. However we do need help to suggest venues and to help organise this, so if you feel you would like to help with this, please contact Nigel Hunter. [nigel\\_w98@yahoo.co.uk](mailto:nigel_w98@yahoo.co.uk)

## ***Xiphophorus milleri* ROSEN,**

**1960** By Derek Lambert

Family: Poeciliidae GARMAN, 1895

Synonyms: None.

Range: This species is known only from Lake Catemaco and its surrounding feeder streams.

**Common Name:**

Catamaco Platy **Dorsal**

**fin ray count:**

11. **Size:** Males 1.5 - 9-11

3cms Females 4.5cms

Introduction to the U.K. First imported to the U.K. by Howard Preston during the 1970's. Since then several new collections of this species have been made and Dr Kallman made several different colour morphs available to Viviparous when closing down his laboratory in the early 1990's.

**Description:** The male pictured is 3cm long large morph fish which has the genes for black stripe and black gonopodium as well. Large morph males of this species often show a false gravid spot. There are many other colour forms of this species including a black form in which the males are almost completely black and only reach a size of 1.5cms when fully grown. In all colour morphs there is a small black spot where the lateral line meets the tail. This may be masked by other pigmentation.



**Temperament and Care:** This is a peaceful robust species which does well in captivity. It likes a well planted aquarium with plenty of hiding places and gentle filtration. The temperature should be set at about 74 F (23 C) but they can tolerate anywhere between 68 and 80 F (20 - 27 C). They eat all foods but do best when some live foods are included in their diet. Newly hatched Brine Shrimp is greedily taken by fish of all sizes and will help boost their growth rate significantly. Fry are produced every month with small females producing about 10 babies but large females may have as many as 50 young. An average brood numbers about 20 youngsters.

These grow quickly if well fed and will start to sex out at between 3 and 6 months of age depending on which size morph the fish is. Small morph fish such as the black form sex out at 3 months old whilst large

morph fish will be nearer 6 months old before the males develop their gonopodium. Many *Xiphophorus* species, including this one, can be reliably sexed before the males develop their gonopodium by checking for a gravid spot. Young females develop this even when they are not pregnant and they become sexually mature at a younger age than males.

Those fish in a brood which have not developed a gravid spot after the females have, are almost certainly males. In strains where the males develop a false gravid spot this only starts to show after the gonopodium has begun to develop.

**Preventing hybrids** :- All members of this genus are likely to hybridise if they are kept together in an aquarium. It is, therefore, vital that only one species of Platy or Swordtail is kept in an aquarium. By all means keep other Poeciliids with them, but never mix *Xiphophorus* species together.





*Phalloceros caudimaculatus*  
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