

# Livebearer News

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BRITISH LIVEBEARER ASSOCIATION



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### Data Protection Act

In order to comply with the requirements of the Data Protection Act, we need to inform members that their name, address, email 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.

### Committee

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## Editorial

First off, I need to start with the usual plea for articles – I have very little in reserve at the moment. I must say thank-you to Sara Fulton for more of her photos, again they are much better than any I manage to take – I wish I knew how she does it. Also thanks to Omar Dominguez-Dominguez and his group for the article about the re-introduction of the Crescent Zoe to its natural habitat.

Skiffia! I keep *Skiffia multipunctata* and *Skiffia* “V188 sayula”. I have also kept *Skiffia francescae* in the past but lost them after about three generations. Are these three forms three separate species, or just one or maybe two? Does anyone out there know? I have heard it said in conversation that *Skiffia francescae* and *S. multipunctata* are different enough genetically to be considered separate species and that *S. “sayula”* are genetically very similar to *S. multipunctata* whilst looking closer to *S. francescae*. I like the idea, which I believe is credited to J. Lyons of the American branch of the GWG, of labelling them ECUs – Ecologically Significant Units – and not worrying about whether they are species, sub-species or just local forms. Relevance to us as fish-keepers?

1. Keep them separate! There is no question but that they will interbreed if given the chance.
2. Keep breeding them! All three forms are either endangered (*S. multipunctata*) or extinct in the wild (the other two). It is possible that one day descendants of your current stock could be useful for re-introduction schemes – possibly!
3. Label them properly, especially if you sell any of your fish. At the last few auctions that I have attended there have been fish that looked like *S. “sayula”* that were labelled as *S. francescae*. Also a couple of years ago I supplied an aquarium

shop with some *S. “sayula”* and on a return visit they were labelled as *S. francescae*. To his credit, the retailer immediately corrected the labelling. Why bother? If any of the three forms are ever re-introduced to the wild it needs to be the correct form in the correct place.

## Snippets

**1. Water hardness.** What does it mean? What is the relevance to us? Hard water is water which will not lather well with soap due to the presence of dissolved calcium compounds or magnesium compounds, particularly the hydrogencarbonates and sulphates of the two metals. So what? Many of the livebearers we keep will adapt well to water of any hardness but others have a strong preference for hard water or soft water. Many *Goodeids* do not like soft water and some of the rarer South American *Poeciliids* do not like hard water. How do you find out the hardness of your water? – Buy a test kit and follow the instructions. There are lots of different ones available. The kit that I bought was made by a German company and gives me a hardness value in DH, or German degree of hardness. British and American kits measure the hardness differently :-

1 British degree x 0.8 = 1 German degree °DH

1 British degree x 0.84 = 1 American degree.

What do the results mean ?

Hardness	Equivalent to ppm of CaCO <sub>3</sub>	British degrees of hardness	German degrees of hardness	American degrees of hardness
Very soft	0 - 50	0 – 3.5	0 - 3	0 - 3
Moderately soft	50 - 100	3.5 - 7	3 – 5.5	3 - 6
Slightly hard	100 - 150	7 - 11	5.5 - 8	6 - 9
Moderately hard	150 - 200	11 - 14	8 - 11	9 - 12
Hard	200 - 300	14 - 21	11 - 17	12 – 18
Very hard	Over 300	Over 21	Over 17	Over 18

I have never bothered to buy a test kit that distinguishes between “Carbonate Hardness” and “Total Hardness”, though I know that if the Carbonate Hardness is too low then the pH can easily drop to very low levels and cause fish losses. I would be interested to hear any comments on this.

If your water is too soft or too acidic you can make it harder and more alkaline by adding calcium carbonate in the form of crushed shells or coral gravel to a tank. Reducing hardness takes more work but can be done by diluting tap water with rain-water, distilled water or water from a Reverse Osmosis purifier. I mix one part tap water with four parts rain-water or water from the de-humidifier for my tanks of dwarf cichlids.

## 2. Blind cave livebearers?

I was re-reading a (very) old copy of “*Practical Fish-keeping*” when I came across a reference to the American Cave Livebearers *Amblyopsis spelaeus*, *A. rosae* and *Speoplatyrhinus poulsoni* which are considered to be endangered by the IUCN. I googled these species for more

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information only to read that they are not livebearers after all! The first two at least brood their eggs in their gill chambers for four to five months before hatching and the *S. poulsoni* probably do the same. Shame! I thought that they sounded like interesting additions to the list of livebearers we might one day keep.

## Report on the Spring BLA and FGUK meeting

The meeting was held on the 23<sup>rd</sup> and 24<sup>th</sup> February at the IBM offices in Warwick. This is a brilliant location; spacious, clean and comfortable with loads of free parking and a hotel opposite for anyone wanting to attend both days. Many thanks again to Bill Galbally for organising the use of the premises. I arrived quite late on the Saturday morning with the display of Endler’s and wild livebearers looking very impressive and (as usual) a stunning variety of guppies in the guppy show. Anyone with an interest in keeping guppies really needs to see the standard of the fish in a show like this! During Saturday there were talks from Bill Galbally [water quality], Dr David Pool [What is wrong with my fish?], Derrick Clayton [growth stages, fry – adult], Dr Pool again [secrets of successful disease treatment], Andy.... [how to develop your strain of guppies], and Nigel Hunter on the conservation of *Zoogoneticus tequila*.

On the Sunday we tried something new – “Ask the Expert”. The experts in question were David McAllister, Nigel Hunter, Bill Galbally and Andy ..... . Stuart Hemming had prepared some questions in advance to start things off and then questions came thick and fast from the floor. A sometimes lively debate ensued. One point that surprised me was how little the majority of the audience knew about what the water

companies add to our tap water. This would make the basis for a long article but the main point learned was that the chlorine in tap water will disperse into the air if water is left to stand for 24 hours before use and will disperse even faster if the water is aerated.

After that came the auction. As usual, there were some real bargains to be had. The top price of £62 was for a pair of *Xiphophorus variatus* with black spotted bodies and bright yellow dorsal and caudal fins. By a strange coincidence, the ancestors of the strain were originally collected from the wild in the 1980s by Dave McAllister who was the auctioneer! By another coincidence I came across a video of the wild fish on You tube. [Type “Xiphophorus variatus SKHC” into You-tube. ] The atmosphere all week-end was friendly and relaxed and I enjoyed the convention more than any previous one. My thanks to all the people who put in the time and effort to make the event such a success.

### What is your opinion?

I would like to include articles on the following subjects in future issues of the newsletter and would love to hear your opinions:-

1. What is the best way to euthanize fish?
2. Are snails in the aquarium such a “bad thing”?
3. The quality of your tap water. Is it suitable for keeping your fish?



*Xenophallus umbritalis* Photo by J. Sara Fulton

### SUCCESS IN THE REINTRODUCTION OF THE TEQUILA SPLITFIN (ZOOGONETICUS TEQUILA) IN ITS NATIVE ENVIRONMENT

Luis H. Escalera-Vázquez<sup>1</sup>, Yvonne Herreras-Diego<sup>1</sup>, David Tafolla Venegas<sup>1</sup>, Rubén Hernández Morales<sup>1</sup>, Ana Leticia Escalante Jiménez<sup>1</sup>, Martina Medina Nava<sup>1</sup>, Federico Hernández Valencia<sup>1</sup>, Gerardo García<sup>2</sup> & Omar Domínguez-Domínguez<sup>1</sup>.

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Anthropogenic activities have modified environmental processes at different time and space scales. One of the most tangible indicator is the extinction of biological species related to environmental degradation, pollution, urbanization, introduction and success of non-native species. Nowadays, from a global perspective is difficult not to find a degraded environment regarding that people is spreading all over the world. Therefore, in this XXI century, actions to conserve and recover degraded environments are pronounced, including ecological restoration and the reintroduction of native species. This process is a time-energy-and-money consuming action, however, when social sectors are included generating a common interest, the success can be achieved in less time, use a significantly low money cost, and long term conservation is plausible; in other words, we will accomplish our mother's wise words, "do not clean your mess in your room, keep your room clean!"

Regarding logistics in actions related to ecological restoration (e.g. money, men labor, time, etc.) one way to go is from small to big, from small areas to regions, from simple biological dynamics to complex ecological processes and so on. All the above mentioned might sound complicated if we include social, academic, political, cultural and economic issues, however one successful case of study is the Río Teuchitán (Jalisco state) in México and the re-introduction of the native microendemic Tequila splitfin (*Zoogoneticus tequila*), a fish considered extinct in the wild since ca.1990.

From a general point of view, and based on results related to the strategies above mentioned, we can say that nowadays, the Río Teuchitlán harbors a high abundance of exotic species (e.g. *Poecilia* spp., *Pseudoxiphophorus bimaculatus*, *Xiphophorus hellerii*, *X. maculatus* and *Oreochromis* spp.) in comparison to the native

species (e.g. *Ameca splendens*, *Ictalurus dugesii*, *Goodea atripinnis* and *Z. purhepechus*); this includes the introduction of parasites related to the non-native fish released. The non-native species can consume almost all kind of resources (food), and create competition advantages over native species that consume similar resources. Regarding water and environmental quality from a "fish point" of view, native species are related to areas up-stream, where is best for reproduction and growth (*for them*), and non-native are spread all over, with high abundances downstream near La Vega Dam, where nitrogen concentrations, low dissolved oxygen and noxious bacteria are higher in comparison to upstream areas, confirming that a non-native species can become invasive if its ranges of tolerance to different environmental factor are wide. This gave the information needed for selecting locations and areas for the reintroducing the Tequila Splitfin, where? Of course, upstream!... But wait, what about the parasites related to the Tequila Splitfin population bred outside the Teuchitlán river? Studies regarding the species of parasite present in guts, scales, and branches in individuals of the founder population of Tequila Splitfin and a de-worming treatment were conducted simultaneously with the strategies above mentioned. Overall the outcome was that the fish individuals to be reintroduce were free of parasite species, avoiding the introduction of new parasite. This looks pretty well! let's reintroduce the Tequila Splitfin but carefully and in a controlled way in order to monitor its response using an intermediate system "between laboratory and field conditions". Scientifically speaking we created *mesocosms* and monitored population and individual growth inside these systems; in English, we put individuals of the Tequila Splitfin previously measured into homogenous cages and monitored food, fries, parasites and growth (Fig. 1). Tequila Splitfin performed well from an ecological sense; high mortality was showed (as expected), but

once stabilized young-borne-there individuals appeared. Now, released some to the Teuchitlán River...good speed, farewell good bye little Tequila Splitfin. No yet, after this we had to look for some individuals in the wild and see how they are doing, also, we need to keep in mind that local people and government should take care not only of the fish species, but the aquatic ecosystem as well.

Therefore, awareness activities to local schools and local politician took place (Fig. 2).

Regarding the activities mentioned above, as result, individuals of Tequila Splitfin were found in the wild, colorful and healthy (Fig. 3). *In situ* we find that this new population eat insects, smaller fish, and in less proportion plants; and (based on laboratory experiments) most of the threats are related to the success of invasive species such as *Pseudoxiphophorus bimaculatus* which prevents the population growth of *Z. tequila*. Nowadays, monitoring plans and eradication of no-native species are taking place in collaborative work with schools, government, aquarists and scientists, highlighting the success of the reintroduction program performed by a group of people with different perspectives but with a common objective, maintain the native fauna of an aquatic ecosystem.

### **What's next?**

When we solve some questions or problems, new ones come out. Now, in terms of research, we can test if some of the factors hypothesized in relation to the extinction of *Z. tequila* were those now present; in plain English, if the species decrease in abundance or disappear (again) *in situ*, then pollution, urbanization, introduction of non-native species are the major factors related to the extinction of this species; if the species remains (regarding this factors), then “something else” is acting as driver of extinction. Therefore, studies on the genetic structure of the founder population; management of water resources and benefits of maintaining

ecosystems services are considered.

From another point of view, if this species remains then, one big step moved successfully forward in the recovery of native biodiversity, implicitly implying that ecosystem services and natural resources can be recovered when a bunch of people look for the common wealth. One step from this, is recovering native populations, such as *Notropis amecae*, that is already introduced but in which the monitoring have not been as systematic as with *Z. tequila*. Also the next target species for reintroduction in the Teuchitlán River is, why not, *Skiffia francesae*.

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The Mohammed Bin Zayed Species Conservation Fund; Haus des Meeres-Aqua Terra Zoo; Poecilia Scandinavia, Poecilia Netherlands; The Missouri Aquarium Society, Deutsche; Gesellschaft für Lebendgebärende Zahnkarpfen; British Livebearer Association; Goodeid Working Group, American Livebearers Association; The Mexican Commission for the Knowledge and Use of Biodiversity (CONABIO) and Association Beauval Nature Pour la Conservation et la Recherche.

### **Recommended Literature.**

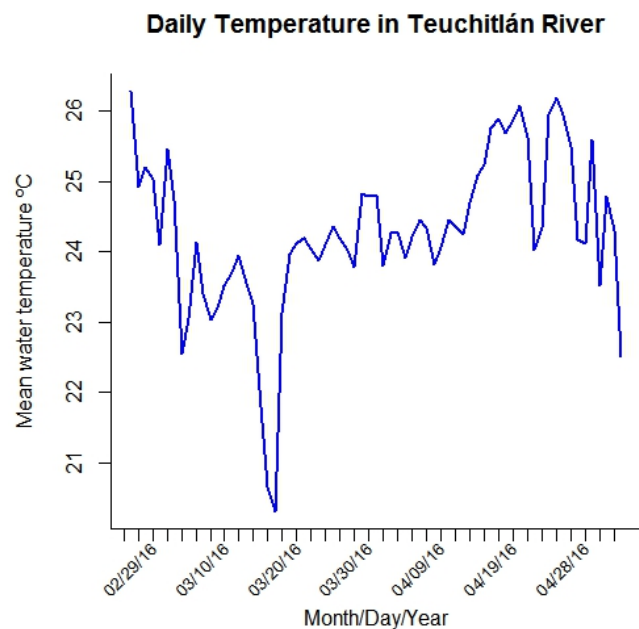
- Domínguez-Domínguez, Omar, Luis Zambrano, Luis Humberto Escalera-Vázquez, Rodolfo Pérez-Rodríguez y Gerardo Pérez-Ponce de León (2008). Cambio en la distribución de goodeidos (Osteichthyes: Cyprinodontiformes: Goodeidae) en cuencas hidrológicas del centro de México. Revista Mexicana de Biodiversidad 79: 501- 512. ISSN 2007-8706

- Domínguez-Domínguez Omar, Rubén Hernández Morales, Martina Medina Nava, Yvonne Herrerías Diego, David Tafolla Venegas, Ana Leticia Escalante Jiménez, Luis H. Escalera-Vázquez & Gerardo García (2018) Progress in the re-introduction program of the tequila splitfin at the springs of Teuchitlán, Jalisco, Mexico. *In* Global Re-introduction Perspectives: 2018 Case-studies from around the globe. Pritpal S. Soorae (eds). IUCN/SSC Re-introduction Specialist Group & Environment Agency-ABU DHAB. ISBN: 978-2-8317-1901-6 (online) Print 978-2-8317-1902-3



- Escalera-Vázquez, Luis, H., Domínguez-Domínguez, O., Hinojosa-Garro, D. & Zambrano, L. (2016) Changes in diet, growth and survivorship of the native Tequila Splitfin *Zoogoneticus tequila* in co-occurrence with the non-native Shortfin Molly *Poecilia mexicana*. *Fundamental and Applied Limnology/Archiv für Hydrobiologie* 188(4): 341-351.
- Escalera-Vázquez, Omar Domínguez-Domínguez, S.S.S. Sarma & S. Nandini. (2004). Selective Feeding on Zooplankton by larval *Skiffia multipunctata* (Goodeidae). *Journal of Freshwater Ecology*, 19 (3): 433-439.

First constant monitoring of temperature (partial data; Source: Luis Escalera)



Monitoring of fish communities (Photo by Martina Medina)



*Xiphophorus pygmaeus* :Photo J. Sara Fulton  
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*Poeciliopsis gracilis* : Photo J. Sara Fulton  
16





Endler's female : Photo : J. Sara Fulton  
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Photo : J.Sara Fulton



Endler's male : Photo : J. Sara Fulton

### Judging guppies to IKGH standards, Part 3, by Steve Elliot

This seems to be a very simple task, but sometimes it can be very difficult. The sword tails are easily identified. The lyre tail is the most difficult, sometimes being confused with a double sword tail. The key here (for the lyre tail guppy) is that the swords should outwardly curve to form the shape of the lyre musical instrument and the dorsal should outwardly curve too.

The Broad tails can be difficult with poor quality guppies. A bad quality triangle tail may not have the wide angle tail and so could be confused with a fantail. That is until we check the dorsal shape, a Fan tail has a pointed dorsal.

A poor quality triangle tail could also have a convex top and bottom edges to the tail which would make it look like a Veil tail.



The key to a good Flag tail is to have a parallel top and bottom edge to prevent confusion with a fan tail.





The short tail group can be the most difficult to identify. A bad quality guppy could be a poor Spear tail, Spade tail or Round tail. This is a poor quality exhibit especially without looking at the dorsal fin:



The dorsal fin shape can be the biggest aid to identifying the tail shape. For example what is this:



It could be a spade tail ?

But if we look at the dorsal I think it is intended as a Round tail.



Many breeders do not realise that the round in a pin tail should be very much smaller than the round of a round tail! This is easily seen in the line drawings

So you can see that the first number for tail shape is not as easy as it first appears.

The **second number** of the code is that of the base colour. But we have to explain what base colour is. We all know that a guppy comes as a grey colour and also blond. These are two base colours. Everyone knows Albino, this is also a base colour. There are 10 base colours.

**The acknowledged base colours are :**

- 1     **Grey,**
- 2     **Gold,**
- 3     **Blond,**
- 4     **Blue,**
- 5     **Pink,**
- 6     **Albino,**
- 7     **White,**
- 8     **Silver,**
- 9     **Cream,**
- 10    **Lutino     (differentiates as opaque colour).**

The base colours can influence and help with our breeding of guppies to improve the colour.

For example here is a grey half black yellow.



The same guppy with a blond base colour is thus.



Blond is a form of albinism and we can see that the blond version does not have strong black pigment, a better show fish has the grey base colour.

We can use this affect as a tool in our breeding.

Here is a (weak) full red grey base colour that shows lots of dark colour bleeding through.



We produce the same full red with a blond base and the dark pigment is reduced.



We can see immediately that the dark areas are reduced but not eliminated so to take it a step further we have the albino version which removes all the black pigment.



The colours are much cleaner and even.



We can identify and see the base colour, or ground colour as it is sometimes referred, to by looking at the forehead and sometimes the throat and belly of the male. It is much easier to see the base colours on a female guppy.

When we show guppies we have to have a matched pair. This also means that the male and female should both have the same base colour. Even if they are brother and sister, they must have the same base colour to avoid being disqualified.

It can be surprisingly difficult sometimes to tell a yellowy grey from a greyey blond ! The rules state that if there is any doubt then they should be classed as Grey. (but the male and female MUST match.)

It can be very, very difficult to code the 200 entries in a show – it can take 2 hours to inspect every one and by the end you can be losing the will to live! Whilst the IKGH rules state that the judges must code the fish, I prefer that the tanks are marked with the code provided by the breeder. The judges can then check and agree, or disagree and change the code based upon what they can see. The difference is that the base colours such as blue or silver can be properly noted and not missed and identified as grey. This is easy to do. In a similar way the cream and white could be mis-interpreted as blond. Many shows check the fish during the booking-in to what the breeder has stated, which also helps the judges.

The following pictures are self explanatory. The descriptions are all included in the IKGH rules.

**1 GREY** Body colour grey is the predominant colour in natural guppy populations

Female triangle tail - GREY – red



Round tail – GREY – filigran



Triangle tail – GREY –  
Moscow / blue

Triangle tail –  
GREY – galaxy

**Diary Dates**

1. Sunday 16<sup>th</sup> June :-  
Preston and District Aquarist Society  
Auction  
Leyland & Farrington Social Club  
1 Derby St  
Leyland, Lancs  
PR25 4NU
2. Sheaf Valley Aquarist Society (SVAS)  
Night Auction  
Wednesday 12<sup>th</sup> June  
The Phoenix Pub,  
Greengate Lane,  
High Green, Sheffield  
S35 3GS  
Doors open from 6.00pm and auction starts 7.00pm prompt.

3. Preston and District Aquarist Society Convention  
Sunday 8<sup>th</sup> September,  
Hallmark Hotel,  
Leyland Way,  
Leyland,  
Lancs PR25 4JX.

4. Sheaf Valley Aquarist Society Summer Show and Auction  
The Rockingham Centre,  
Sheffield Road,  
Hoyland Common,  
Barnsley,  
S74 0PY  
11.00am start with auction starting at 1.00pm  
It is intended that a number of BLA members will attend and  
put on a display of wild-type livebearers. They will possibly  
also enter fish in the auction.

5. Joint Fancy Guppy UK show and BLA Auction  
IBM Warwick  
Saturday 4<sup>th</sup> and Sunday 5<sup>th</sup> October  
The guppy show is the last leg of this year’s guppy league.  
We are also planning a display of biotopes, probably four  
speakers, “Ask the expert” and auction of guppies and wild-  
type livebearers.

I will email all BLA members with more details of this event  
closer to the time. The spring event was a great “do” and I  
hope that as many members as possible will be able to attend  
this year.

**Good home needed !**

BLA member J. Sara Fulton has six young *Xiphophorus pygmaeus* that she does not have room to grow on and needs to find a home for. She is happy to give them [free] to someone who will grow them on and hopefully breed from them. She lives near Rochdale, Lancs, but is happy to post them to someone who can give them a home. Her email address is :-  
jsarafulton@virginmedia.com

**And finally.....**

Can you help to promote the British Livebearer association?

Can you please print off a copy [or two] of the flier opposite and ask your local aquarium shop to display it.

We need all the publicity that we can get!

**THE  
BRITISH LIVEBEARER ASSOCIATION**

**The BLA is a group of enthusiasts whose hobby is keeping and maintaining livebearing fish.**

Our aim as hobbyists is to promote the conservation and maintenance of many different species of livebearers within our association.



Conservation of livebearers is an important topic to us, and as such we actively support and promote conservation projects including the Fish Ark Mexico and the Goodeid Working Group.



Events are organised during the year at various venues around the country, these events will generally consist of informative talks and an auction. The auctions are the ideal places to see and buy some of the more unusual and difficult to find livebearers, they also provide a great opportunity to meet other members who will happily discuss your livebearers with you.

Online annual membership is £6, as a member you will receive a welcome email with details about the association and you will also receive 4 newsletters during the year.

Further details of the BLA including how to join online are available on the BLA website.  
[www.britishlivebearerassociation](http://www.britishlivebearerassociation)

