Livebearer News

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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.

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Editorial

Once again I must start by giving my thanks to helpers and contributors. So thank you Alan Rothwell for you notes on *Xiphophorus helleri* "Rio Bellaire, Guatemala". Many thanks also to Dan Fromm for his notes on his recent trip to Panama and for checking and sub-editing my efforts. And most of all, thanks to Michael Köck for allowing me to use the material that he has posted on "Facebook".

Speaking of Michael; he is the chairman of the Goodeid Working Group's European chapter. Have you looked at the website of the GWG? – Lots of good information there. And I recently joined the GWG's "Facebook" page. Loads of good stuff there including the notes about *Allotoca* species that I have included in this newsletter. The photo below of a pair of (I think) *Skiffia multipunctata* from Lake Camecuaro is just one example.



Skiffia multipunctata from Lake Camecuaro, Mexico. Photo posted on "Facebook" by Michael Köck.

There are an awful lot of interesting fish species out there. There are plenty of interesting livebearers, in fact. One of the privileges of doing the editing is being able to choose which material to include and since I am particularly interested in Goodeids there tends to be a lot of articles about them. And if Goodeids are not your cup of tea? Well, you could always write something about the livebearers that interest you and I will put that into the newsletter. Don't worry about spelling and stuff like that – that is my job. Any livebearer, any topic, collecting, trips to see them, showing them, breeding them – any of those would be fine.

Another of the privileges of the editing job is that I am in contact by email with livebearer enthusiasts around the world. I received an email just today from Rit Forcier of the American Livebearer Association with a "Powerpoint" presentation about the ALA convention which this year is being held from the 16th to the 20th May at the Embassy Suites, Tampa Airport, Tampa, Florida. If you would like me to forward the presentation then email me and I will do so. NB There is lots more information about the ALA convention on their website.

Snippets

1. At the autumn convention in October I spent a very pleasant Saturday evening in the company of a dozen or so BLA members and the conversation revolved around things fishy (and the rugby, but the less said about the better). *Characodon audax* were mentioned and I told how my best female had recently dropped just four fry, which were growing very slowly. Dave Macallister went on to tell the tale of how some years ago, his partner had sat with a gravid female *C. audax* and immediately removed each fry as it was born and before the female had chance to eat it. After 24 hours she had rescued a total of 72 fry! Is the reduced fertility now a result of too many years of line breeding? If you know the answer then I would love to hear from you.

2. Sometimes we make mistakes and sometimes we are just unlucky. I caught Covid (as many people have before me) just as the weather turned cold and the temperature in my (unheated) fish-room dropped. No problem – I have heaters in the tanks with the more delicate fish set to the minimum temperature, 20° C. But after my bad mistake with my adult *Allotoca zacapuensis* I put the remaining adults in with the fry of that species – and the heater failed! I was feeling so bad that all I did was put food into all the tanks and didn't take any notice of the behaviour of the fishes. And as a result all of the *A. zacapuensis* died, adults and fry. So, was I unlucky or did I make another mistake? Your thoughts would be appreciated.

3. Thanks to Nigel Hunter for a post on "Facebook" listing all the species of *Xiphophorus* with location data that are being maintained in the UK:

Swordtails	Platies
Swordtails X. alvarezi X. birchmanni X. clemenciae X. continens X. cortezi X. hellerii X. hellerii X. hallmani X. malinche X. mayae X. mixei X. montezumae X. monteclus X. multilineatus X. nezahualcoyotl	Platies X. andersi X.couchianus X. evelynae X. gordoni X. maculatus X. meyeri X. milleri X. variatus X. xiphidium
X. nigrensis X. pygmaeus X. signum	

4. I visited an aquarium shop in a garden centre near Chester recently and they had two species of goodeid on sale: Xenotoca eiseni (and OK I am not an expert but to me they looked like *eiseni* rather than *doadrioi* to me) selling for £20 each or £35 a pair and Ameca splendens selling for £12 a pair. I wonder how many they will sell at those prices! If you want to get hold of more species of goodeid then your best bet is to come to one of the auctions that the BLA are holding this year, at venues all around the country. The first one is in Bristol in just a few weeks' time. [See the "Diary Dates" at the end of this newsletter.]

A few poor photographs of Panamanian poeciliids with remarks on *Brachy-rhaphis episcopi*

Dan Fromm

In late February 2024 I had returned to Panama after a 22-year absence to visit my friend Rigoberto González G., collection manager, fishes, of the Smithsonian Tropical Research Institute and to revisit some of my old sites to see how they'd changed and what was still there. We focused on sites in Coclé where Rigo, my wife and I had collected some puzzling *Brachyraphis* and *Rivulus* (broad sense); on sites in Veraguas where we'd collected an appealing headwater isolate of *Poeciliopsis elongata*; and on the type localities of *Poecilia gillii, R. villwocki* and *R. montium*, all in Colón province. I didn't have permits to export fish so we caught fish, I photographed them, and then we released them or Rigo preserved them for STRI.

Panama City has changed out of recognition. The landmarks I knew no longer exist. I couldn't have navigated my way across it unaided. Our old sites in Coclé and Veraguas were also unrecognizable. Farmers had given up on cattle and forests, which had been cleared to make pastures, came back. We found our old sites with the help of a sat-nav receiver. Some sites no longer had water because of drought. The fish were still there where there was water but were less abundant than formerly.

About *B. episcopi*. It was described from the basin of the Río Chagres, which flows to the Caribbean Sea. Classic *B. episcopi*, which has a row of black spots along the lateral line, occurs only in the former Canal Zone, on both slopes. The *episcopi* clade occurs primarily on the Caribbean slope, from somewhere in the Kuna Yala in the east nearly to Costa Rica in the west. It is immense and deeply diverged.

The majority of members have no black pigmentation. In my experience "*episcopi*" with black pigment along the lateral line are all hill stream fish. The pallid forms, with no black pigmentation, are much less demanding, occur in streams *and* marshes and are much more widely distributed.

At present the *episcopi* clade has four described species: *B. episcopi* and *B. roswithae*, both with black pigment; and *B. punctifer* and *B. hessfeldi*, both pallid. I expect that there are undescribed species in the clade, but the pallid ones are very hard to tell apart.

We collected no *Poecilia* in the Chagres so I can't present photos of the real *P. gillii*. We found two populations of pallid *B. episcopi* and several of the widely distributed and common *Neoheterandria tridentiger*. We found only small juveniles of the La Yeguada *Poeciliopsis*. My photos of them are too poor to show.

Here are a few photos:



Female *Brachyraphis cf episcopi* from a creek crossing the Toabre road. Photo: *Dan Fromm*.



Male *Brachyraphis cf episcopi* from a creek crossing Toabre road. Photo: *Dan Fromm*.



Male Neoheteranria tridentiger Rio San Juan at La Yeguada. Photo: Dan Fromm.



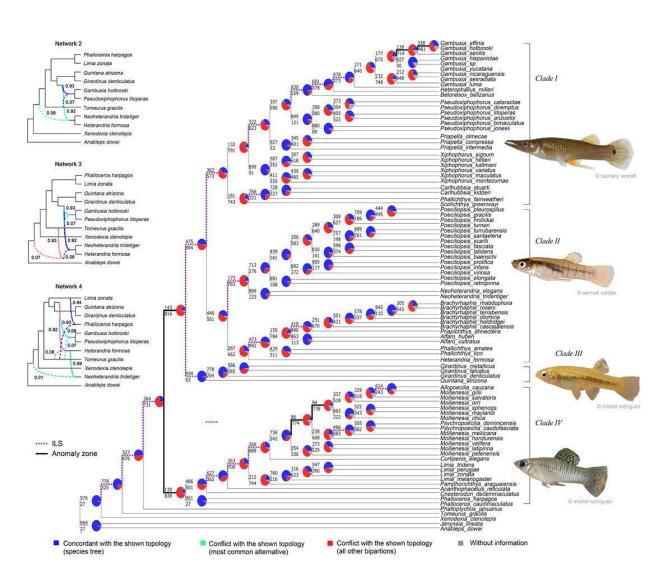
Female *Brachyraphis cf episcopi* from a creek of the Rio Chagres between Salamanca and Gatuncillo. Photo: *Dan Fromm*.



Male *Brachyraphis cf episcopi* from a creek of the Rio Chagres between Salamanca and Gatuncillo.

A recent poeciliid phylogeny

Posted on "Facebook" by Erwin Radax



Editor's note: This figure came from Rodríguez-Machado et al. 2023. Disentangling historical relationships within Poeciliidae (Teleostei: Cyprinodontiformes) using ultraconserved elements. Molecular Phylogenetics and Evolution 190 (2024)

Observations on Xiphophorus helleri "Rio Bellaire, Guatemala"

Alan Rothwell

Two friends brought me a bag of fry of this species from Vienna. Anyway, I managed to raise the fry to adulthood in a tank of 30" x 15" x 12" [75cm x 37.5cm x 30cm] with a home-made filter made from a food container, which measured 6" x 6" x 3". [I have also, in the past, used the large size maggot boxes for the same purpose.] I used an upside-down funnel with holes drilled in it and a layer of "Alpha-grog" with two layers of pond filter on top of that. I have found these arrangements to work very well over the years.

Anyway, the fry grew up and now I have a tank full. The only decoration in the tank is a large amount of Java moss to give the fry hiding places. The adults don't appear to eat the young and the fish are flock bred.

This is a small variety of *X. helleri* with the males getting to 50mm S.L. and the females 65mm.



Xiphophorus helleri Rio Bellaire, Guatemala. Photo: Alan Rothwell.

Sub-editor's comment: A Google search found references to *X. mayae* from the Río Bellaire in Guatemala and Honduras, none to *X. helleri* from that river, and one to a Río Bellaire in México. geonames.org has no record of a Río Bellaire anywhere in the world. Mistakes happen.

Photo of Alloophorus robustus



Alloophorus robustus in the livebearer show at the Autumn Convention at Shenstone, and very impressive he was too! *Photo: Greg Roebuck*



Photo of *Characodon audax*

Characodon audax: Photo: *Elke Weiand* [I hope to include an article from Michael Köck about the discovery of the fish of this genus in the next newsletter.]

The genus *Allotoca*, by Michael Köck [From the GWG "Facebook" page]

Allotoca catarinae, A. diazi and A. meeki

These three make up the *Allotoca diazi*-group (*Allotoca catarinae, diazi* and *meeki*). Three species that are closely related to each other and hard to tell apart, and species that share a common and interwoven history in describing, and the three species were partly even thought to belong to just one. In the alphabet, *Allotoca catarinae* would be next, but I start with *Allotoca diazi*, the species among these three that was described first, already back in 1902 by Seth Eugene Meek (Meek 1902), again in the genus *Zoogoneticus* and not only once but twice, then he also described in the same paper *Zoogoneticus* was erected. While he located *A. diazi* in the Pátzcuaro and Zirahuén (!) lakes, he did this erroneously for *A. miniatus* far away in the Chalco lake in Mexico City. A rare mistake for Meek.

This species and the paper where both "species" were described was recently a topic on this page and gave me the idea to start the series of descriptions here. When someone reads carefully through the paper, he will find another description (or precisely spoken two) that I am not going to talk about today. Three species are already enough.

Hubbs and Turner 1939 erected for *Zoogoneticus diazi* the genus *Neoophorus* and called it *Neoophorus diazi*, and added individuals to this species that were collected in Uruapan (!). Only three years later, Fernando de Buen 1942 described this population from Uruapan as a new subspecies, *Allotoca diazi catarinae* and another Mexican, José Álvarez del Villar 1959 raised it into specific rank when he described *Neoophorus meeki* from the Zirahuén lake in 1959. Remember: Meek's *Zoogoneticus diazi* was partly taken from this lake. Both papers are in Spanish. Only fair after so many English descriptions. Enjoy translating.

Due to the fact that Meek from the Zirahuén and Pátzcuaro lakes and later on Hubbs and Turner from these two lakes but also Uruapan mixed the species in their material, we have quite a list of synonyms saying "partially". Anyway, all of them are great fish, highly endangered and restricted to endorheic waterbodies (*diazi, meeki*) and one short river stretch (*catarinae*). For all species of the genus *Allotoca* exists a conservation project. Be part of it. <u>https://www.conservation.oevvoe.org/en/allotoca-mesa-central</u> Since 2001 by the way, they are all three finally member of the genus *Allotoca*, but as this change was done in the description of *Allotoca zacapuensis*, read on to learn more about that.



Allotoca catarinae, male from the Caltzonzin dam in Uruapan. Copyright © Erwin Radax.



Allotoca catarinae, female from the Caltzonzin dam in Uruapan. Copyright © *Erwin Radax.*



Allotoca diazi, male from a spring near Chapultepec, Lago de Pâtzcuaro drainage. Copyright © *Erwin Radax*.



Allotoca diazi, female from a spring near Chapultepec, Lago de Pâtzcuaro drainage. Copyright © *Erwin Radax*.



Allotoca meeki, male from the dam in Opopeo, Lago de Zirahuén drainage. Copyright © Erwin Radax.



Allotoca meeki, female from the dam in Opopeo, Lago de Zirahuén drainage. Copyright © Erwin Radax.

Allotoca dugesii and Allotoca maculata

I call them the twins because they look so similar. Both are outstanding fish. There is a conspicuous sexual dimorphism in Goodeids in general, but these two *Allotoca* species are exceptional. It is not only that males and females have a different body shape, also the coloration is totally different between the sexes. Males have a lateral stripe and the ventral part of the body is brighter than the dorsal part, whereas females show vertical bright blue shiny bands on the flanks. Striking! While *maculata* males keep their colour mostly between grey and silver, *dugesii* males can be brown, golden, yellow, or - as there are melanistic forms occurring - with black blotches or even totally black.

Also the distribution is different: *Allotoca maculata* is restricted to the endorheic Magdalena lake basin while *dugesii* was originally widely distributed, roughly spoken from the Chapala to the Cuitzeo lake. Today both species are threatened with extinction and therefore in need to be bred in the hobby.

Concerning the descriptions, *Allotoca dugesii* is the old lady, almost hundred years older than maculata. Described in Bean 1887 as *Fundulus dugesii* from Guanajuato. You will find more descriptions in this paper. Please forget about them for a while, I will come back to them later. Jordan & Everman 1896 placed this species nine years later in the genus *Adinia* and Meek 1902 in the genus *Zoogoneticus*. Hubbs & Turner 1939 finally placed it in the genus *Allotoca* and the Mexican scientist Fernando de Buén described only one year (de Buen 1940) later from the Pátzcuaro lake from a single female *Allotoca vivipara* due to color differences to Bean's *dugesii* (a blue side instead of bars - something that can be observed in older females in general). However, Smith and Miller 1980 declared *A. vivipara* as a synonym to *dugesii* with only one "i" (*Allotoca dugesi*) and created through that typing mistake another synonym.



Melanistic male *Allotoca dugesii* from the spring near the old mill of Chapultepec, Copyright © *Michael Köck*



Female *Allotoca dugesii* from the spring near the old mill of Chapultepec. Copyright © *Günther Schleussner*



Male *Allotoca dugesii* from the spring near the old mill of Chapultepec. Copyright © *Michael Köck*.



Male Allotoca dugesii from the spring near the old mill of Chapultepec. Copyright © Günther Schleussner.



Male Allotoca maculata from Palo Verde. Copyright © Günther Schleussner.



Male Allotoca maculata from Palo Verde. Copyright © Michael Köck



Female Allotoca maculata from Palo Verde. Copyright © Günther Schleussner.

Allotoca goslinei

We are still in the middle of *Allotoca*, but I would like to jump around a bit, skipping *Allotoca dugesii* for today and proceed with the next one in the Goodeid alphabet. Its closest relative, a species that is probably extinct in the wild and in the centre of conservation breeding efforts, and it is the only *Allotoca* species from the Ameca river drainage: *Allotoca goslinei*. This species is a hidden gem. It never shoes its beauty on

pictures, but whoever saw the subtle color of champagne mixed with dusky pink and blue scales, and whoever got impressed by its prideful posture, fell in love with it. It was originally thought to belong to the same genus as the *Allotoca diazi* group at this time, *Neoophorus*, but was finally described as a member of the genus *Allotoca* by Smith and Miller 1987. Therefore the list of synonyms is quite short: *Neoophorus* sp. by Uyeno et al. I linked this paper in the list of synonyms of this species on the GWG webpage By the way, if someone wants to support the breeding of *Allotoca* species, you could join the ALLOTOCA BREEDERS - working group.



Male Allotoca goslinei. Copyright © Anton Lamboj.



Female Allotoca goslinei. Copyright © Anton Lamboj.

Allotoca zacapuensis

I will finish the genus *Allotoca* with a real jewel: *Allotoca zacapuensis* Meyer, Radda & Domínguez-Domínguez 2001. This species is the last one that has been described so far, and it is in the wild indeed a rare species. It is known only from a few spots in the Zacapú lake and a tiny spring system in its vicinity. Its appearance is somewhere between the *Allotoca diazi* group and *Allotoca dugesii*, and it is indeed the species that links them.



Allotoca zacapuensis, male. Photo and abstract above both from an article posted on the Goodeidae page on "Facebook".



And the female *Allotoca zacapuensis* from the same article.

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Photos



Xiphophorus helleri Rio Atoyac. Photo sent to me by Brian Dent. Brian is looking for a female of this variety and will be attending the show / auction in Bristol if you can help.



Xiphophorus clemenciae; photo posted on "Facebook" by Nigel Hunter.



Ameca splendens, freshly caught at Teuchitlan. Photo by Michael Köck, originally posted on "Facebook".

Diary Dates:

We are planning on holding four meetings next year. Full details will, of course, be on the British Livebearer Association website but the basic outline is :

Spring show
 Bristol, April 21st
 Hengrove Community Centre
 Fortfield Road,
 Bristol,
 BS14 9NX

2. Summer show #1 Hampshire, June 2nd Kempshott Village Hall Pack Lane, Basingstoke, RG22 5HN

3. Another summer show Cumbria, July 7th, Harraby Catholic Club, Edgehill Road, Carlisle, CA1 3PQ

4. Autumn Convention Midlands, September 21st/22nd Shenstone Village Hall, Barnes Lane, Shenstone (Near Lichfield), WS14 0LT

I hope to see you at some, or even all, of these events.