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N.G.L.S.



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AND LIVEBEARER SOCIETY

26
CHAIRMAN'S LETTER

The effects of pollution affect us all. All over the world, our rivers have become contaminated by various types of effluent and as yet, very little is known about the effects on the fish that inhabit these waters. In a recent article in 'Copala' by W. Mike Howell, D. Ann Black & Stephen A. Bartone, the effects of effluent discharged from a paper mill into the Etowah River at Cantonment, Florida, were studied. All the Bambusia affinis holbrooki collected below the discharge showed strong male characteristics, such as change in body shape, etc. the apparent development of a gonopodium in the affected females. When these females were introduced to normal females they began to display as males - the affected males matured much earlier than normal and their natural aggressive manner became much more highly developed. All the fish taken from above the mill and from the surrounding tributaries were found to be normal. The conclusion of the study is that the cause of the change must be linked to the pollution, however both the temperature and pH of the water were within normal limits - the water was highly turbulent and had a high quantity of suspended solids, with chlorides, phosphates, nitrates, ammonia, grease, phenol and coliform bacteria also present. Unfortunately the authors were unable to identify the specific chemical or substance that caused this effect.

The effects of a paper mill spewing effluent into a river is very obvious because of its visual nature and one would have to be the worlds worst aquarist to nod up with a tank anywhere near this level of pollution, however, how many times have you heard someone say "I cannot get my males to grow" or "My males are mature at 4 months old" and then go on to say "It can't be the water as I've checked the pH and OH and they are normal" Could it be some element that doesn't affect the pH? OH to any noticeable level that contributes to the phenomenon, as the report suggests.

As many of our members are already aware, we have been pressing for many years for an updated version of the F.B.I.S. Booklet (standards for cultivated livebearing fishes) and to this end we have been sending our recommendations, suggestions and illustrations to the Judges and Standards Committee in London. Whether they accept, reject or make additions to these is up to them, but all our work is now in their hands and we are all looking forward to seeing the result. I only hope that when this is finished the judges will use it. I have always been an ardent admirer of standards such as the ones produced by the Fancy Guppy Association and the various Goldfish organisations. I believe there should be a written and illustrated review of all the cultivated varieties, as this gives the exhibitor a standard to breed to and the judge a set standard to judge by.

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WE ARE IN THE PROCESS OF UP DATING OUR TAPE/SLIDE SHOW AND WE WOULD BE GRATEFUL IF ANYONE COULD SUPPLY US WITH ANY SLIDES OF LIVEBEARERS THAT WE COULD INCLUDE IN THE SHOW.

N.S.L.S. ACCEPT NO RESPONSIBILITY FOR THE AUTHORS VIEWS OR OPINIONS EXPRESSED IN ARTICLES IN THE NEWSLETTER.

For the past two years I have had the pleasure of owning a pair of Anableps, and I would like to recall for you the story of these two years.

I first made contact with Anableps via Ivan Dibble, from whom I purchased two, 60mm youngsters in March 1979. One of these was quite frail so I decided to rear them individually in 18 x 12 x 12 tanks, each with a gravel bank, polyfilter and 50% marine salt solution.

During the early weeks they received a great deal of attention, especially from my three sons, who delighted in finding and feeding all sorts of insects etc: and I feel that this attention pulled them through that early stage and produced nice fat bellies on some very thin fish.

Within six weeks I felt confident enough to move them, and put both into a 2 ft. tank, high up in the fish house, where they would catch the sun, but 'Oh boy', didn't the algae grow rapidly in that brackish solution. It soon became impossible to keep the tank clean, so another move was called for. This time I had a 6 ft x 12" x 12" tank made for them, into which I installed two under-gravel filters, but no large gravel bank. Instead I manufactured a platform from a big flower pot topped with a piece of slate. This has served very well as a place for them to rest on, and lay out on, for they have similar habits to the Mudskippers and require a place on which to climb out of the water. This set-up has proved to be very successful from a maintenance point of view.

After nine to ten months, it became obvious that one was developing into a male and during the following weeks I watched the male's development with considerable excitement. According to the literature I had, Males are very few in number in wild stocks, so you can understand my excitement. During the next few months I watched anxiously, but never once saw any sign of mating.

Then came the time once again for a major overhaul of their aquarium. They were placed in a 2 ft. 6" tank with plenty of aeration to compensate for their cramped conditions. (By this time they were 6" plus)

Within minutes there was like a thing possessed, and seemed to remember everything that Mother Nature had taught him. Was the answer to increase the aeration in the 6 ft. tank? This I did with two extra corner box filters, so I now had two under-gravels and two corner boxes running. Whether by coincidence I don't know, but it certainly increased the male's ardour.

I then noticed that this particular male could only move the gonopodium to his right, and in fact, the gonopodium has a natural curvature in that direction. DOES ANYONE HAVE A MALE OF THE OPPOSITE HAND? DO THEY EVEN EXIST? T.F.H. states that this species is in fact 'handed' similar to J. lineata. I personally find this difficult to believe, as I can see no visible evidence with regard to the female. Mating is very slow and ponderous, therefore close observation is comparatively easy, and I cannot really see any reason for assuming that the female could not accept a male of the opposite 'hand'.

On October 4th, 1980 fry were born, three alive and three dead. The dead specimens were premature, and one of the living fry obviously had swim bladder problems from which it died next day. I had been promising myself that I would have a tank ready, just in case, but typically I had not done so, and there followed a crazy twenty minutes of setting up and catching fry. By the way, the dead specimen measured 60 mm, including caudal !!!

The two remaining fry were no trouble to maintain and within a few weeks were re-introduced into the parents 6 ft. tank. I have found in the past that one thing the Anableps doesn't seem to like as food is live fish. Poec. vivipara enjoys the same tank and makes a fair job of eating all food that falls to the bottom.

To Conclude

The pair I have I consider to be Anableps anableps as the lateral line count and colour etc: match the description of this species in 'Jenbs'

Almost any food is acceptable, but those of a meaty nature are preferred:- Worms, Beef Heart, Slugs, Caterpillars, or anything that wriggles. Care has to be taken with dried foods, since once this sinks then the interest has gone.

The temperature of my tank is 78 F. with 50% Marine Salt Solution.

Anableps are extremely fast swimmers, and tremendous jumpers. I have seen my female leap the full length of the 6 ft. tank from a standing start, so a cover glass is essential.

The male first started to sex out at about 5" - 6" in length.

QUESTIONS

- a) Has anyone conclusive proof that this species is 'handed'?
- b) When you think of the size of the fry at birth, (50 - 60 mm.) surely this fry must receive nutrition from the mother? Do we have a species similar to Goodoids where the young receive nourishment via the "Trophotaenia" if so, no Trophotaenia was visible on the fry. I do appreciate that this is not always visible on some of the Goodoids. If these fry were reproduced purely from the nourishment of an egg, then the egg would have to be the size of a marble?
- c) I am guessing at a gestation period of 10 - 12 weeks. Has anyone any written evidence?

This species can become extremely tame and will, I am told, even rest on the palm of your hand.
 WHAT'S THE SECRET OF SUCCESS ? - - - - - JUST GETTING HOLD OF A PAIR !!!

??

Our thanks go to Colin for providing this interesting insight into these unusual fish. Like Colin, we bought two of these fish when they appeared on the market in the North East, but unfortunately one died two days afterwards, probably because it was very small, (possibly only a couple of weeks old) and very emaciated, however Jaws, as she was immediately called by my two children started feeding right away and soon developed a liking for Pacific Shrimp. At first she appeared lost in the 6 ft. tank however she soon settled down once she got used to the other fish in the tank. We did attempt to increase the salt content of the water but this resulted in a very rapid deterioration of all the plant life, so the water was gradually changed back to the normal 1 teaspoon of salt per gallon, which had no effect on Jaws what so ever. For the first few months, feeding became a case of try it and see what happens and the list now includes, Pacific Shrimp, fresh boiled mussels, , prawn ribs, prawns, earthworms, blood-worms, mealworms, white-worms, tubifex, flies, cooked chicken and turkey, boiled beans and cooked fish. Freeze dried and frozen food she completely ignored and unfortunately fishy foods just got scattered all over the tank when she tries to eat them. Growth during the first year was very rapid, possibly due to the fact that she soon became very tame and was, and still is, fed from my fingers, and she has now reached 7 1/2" (excluding caudal) and is still growing slowly. Unlike Colin, we did not build a sloping bank to enable her to bank as she started lying on top of large Indian Fern plants, and will also lie in my hand to have her tummy stroked.

The water level in the tank is always kept at least 2" below the rim to give her room in case she decides to start jumping, (she has been known to go from one end of the tank to the other in one leap) but this only happens occasionally now, usually when one of the Corydoras bumps into her on its way to the surface for air and all the other fish tend to ignore her as she does them.

After keeping this fish for nearly two years I have come to the conclusion that they have some form of intelligence, as she can recognize the members of the family and will not accept food from a 'strangers' fingers no matter how hungry she may be, also she will let you know when she is hungry, by lifting her head right out of the water and climbing up the front glass (that's the only way I can describe it) One thing I am trying to work out at present is just how far she can see and I have had a reaction from her, (following my moving hand back and forwards) from 7 ft. away from the tank.

I am at present hoping to obtain a further three young specimens, so if they actually do materialize the experience I have already had in raising "Jaws" should stand me in good stead and hopefully I may be lucky enough to obtain 1 male from the trio and then - - - - "Who Knows"?

Current Status.

Tank size.	6 ft. x 15 ins. x 12 ins.
Water Temperature.	78 - 80 F.
PH.	7.1
Salinity.	1 teaspoon rock salt per gallon.
Filtration.	3 box filters and power filter. (Power filter is used mainly because she likes to sit under the outlet)
Lighting	5 ft. 'Warm White' fluorescent tube - 12 - 14 hrs pwe day.
Other tank inhabitants.	<u>Aneca aplanata</u> , <u>Poec. viviana</u> , <u>Xiph. moenkhausii</u> , <u>Trich. leaci</u> , <u>Corydoras sp.</u> , <u>Betta splendens</u> , <u>Misgurnus</u> , <u>Synodontis sp.</u> , <u>Hyoscoentris apyrinoides</u> , <u>Epilabeochyhus kallopterus</u> , Croaking Catfish.

Mr. D. Renton took the chair after explaining that the President normally chaired this meeting but unfortunately was unable to attend. Mr. Renton continued by saying that the President, Mr. G. Martin, was standing down this year after completing his five year term of office, and asked that a vote of thanks to Mr. Martin be recorded in the minutes, for all the work he has done for the club during his term of office.

The retiring committee then gave their reports:-

Chairman - Mr. D. Renton.

Once again we have had another successful year. Although the meetings in Newcastle were small compared to the actual number of members that we have around the country, everyone who attended was allowed to have his say and was listened to. The trip to Germany, (courtesy of S.L.A.C.) made with another member (Mr. J. Bunn) was very successful. Thanks were expressed to the committee for all their support and work, and to all members who worked at the Three River Show. Mr. Renton ended by saying that the work we sent to London on Standards has been well received.

Secretary - Mrs. J. Renton.

Membership renewals were coming in at a steady pace and hopefully we will attain our 1980 level. The newsletter is still in need of material, especially now as we are publishing quarterly with an increased number of pages.

Treasurer - Mr. J. English.

Finally we have had a good year and the outlook is very bright. The club ended the year with £237-50 in the bank and cash in hand plus stocks of paper, Newsletter fronts and badges, also Booklets 1 & 2 are in profit.

P.R.O. - Mr. R. Gledhill.

Publicity for the club has been good with write-ups in both National Fishkeeping magazines. The requests for Booklets 1 & 2 has been overwhelming during the last couple of months and the Tape/Slide show has been hired out 9 times.

Librarian - Mr. R. Kerr.

The books have not been used a great deal during the past year, however he hopes that 1981 will be the start of greater usage. There is the possibility of N.G.L.S. purchasing the library of the Tyneside Aquatic and Biological Society, which is no longer functioning.

The new Committee was elected as follows:-

- PRESIDENT - MR. R. KERR.
- CHAIRMAN - MR. D. RENTON.
- VICE CHAIRMAN - MR. J. BURN.
- TREASURER - MR. J. ENGLISH.
- SECRETARY - MRS. J. RENTON.
- P.R.O. - MR. C.R. GLEDHILL.
- LIBRARIAN - MR. R. KERR.
- MINUTES SECRETARY - MR. C.R. GLEDHILL & MR. J. ENGLISH.

INTERNATIONAL GUPPY SHOWS.

We have just received information about the European Guppy Championship. This Championship is contested for at three shows during the year, in Austria, Germany and the U.K., so if you are a Guppy man why not start thinking about sending some entries, you don't have to take them personally, they can be sent by air.

Details and rules for Austrian Guppy Show to be held September 13 - 27, 1981.

Entries form should be sent to: ASTRID YOUNG, A - 1030 WEIN, SALMGASSE 13/5.

Entry form should be a simple letter containing:-

- a) Name and address of breeder.

- b). Class which fish are to be entered in.
c). Number of entries.

No entry fees are paid by foreign exhibitors and no other costs are arising during the show.
The fish should arrive in Vienna by ~~Wednesday~~, September 9th, 1961.
The fish should be sent via:

INTERNATIONALE ÖSTERREICHISCHE GUPPYSCHAU,
c/o WILHELM KRELL,
LORNSTRAßE 54 - 60/2/3/11,
A - 1110 WIEN, Austria,
Airport - WEIN-SCHNECHAT.

MARK ON OUTSIDE OF PARCEL - CALL ON ARRIVAL tel.no. 74 48 755.

To make customs clearance easier please state in dispatch papers: "SHOW ENTRIES OF NO COMMERCIAL VALUE"

SHOW RULES

- Any guppy breeder as well as breeder groups are invited to participate. The fish must be bred by the exhibitor.
- Judging will be done to the Standard and Judging Rules of O.G.G. One entry will consist of THREE MATCHED MALES. An additional male and one female can be added. The judges decision is final.
- Classes

DELTA TAIL

- Red.
- Blue - Green.
- Multi-colour.
- $\frac{1}{2}$ & $\frac{3}{4}$ black - solid.
- $\frac{1}{2}$ & $\frac{3}{4}$ black - split.
- Snakekin - extra.
- Any other colour.
- White, Cream, Albino.
- Blond, Gold, Blue.

SANTAL

- Grey.
- $\frac{1}{2}$ & $\frac{3}{4}$ Black.
- White, Cream, Albino.
- Blond, Gold, Blue.
- 4

- VELLTAIL
- SCARFTAIL
- DOUBLE SWORD Grey.
- DOUBLE SWORD - "VIENNESE EMERALDS"
- BOTTOM SWORD - Grey.
- TOP SWORD - grey.
- LYRETAIL - Grey.
- SWORD TYPES - recessive colours.
- ROUNDTAIL - Grey
- COPERTAIL - Grey
- SPEARTAIL - grey
- PINTAIL - Grey
- SHORT TAILS - Recessive colour.

SPECIAL GROUPS.

- COLOURS (M)
- SHAPES (M)
- FEMALES.

- Every exhibitor will receive an award card for every entry, from which the placings can be seen. First places in classes 1 - 26 will receive a trophy if the entry has gained a minimum of 70 pts. Awards for 2nd & 3rd places is possible by decision of Show management. The 1st. place in every Standard will receive a trophy if the entry has gained a minimum of 75 pts.
The entry with the highest number of points of all the classes will receive "BEST OF SHOW" trophy. If one entry should receive several prizes, only one will be awarded (sequence- Best of Show, Best of Standard, Best of Class). Entries in the Special Group will receive predicates, which can be seen in the award cards.
- Shipment and exhibition of fish are at the risk of the breeder.
- The O.G.G. are unable to return overseas entries.
- The O.G.G. will make all efforts to treat the fish carefully but cannot be held responsible for any damage or loss.

DETAILS OF THE GERMAN GUPPY SHOW TO BE HELD ON NOVEMBER 18 - 22, 1961.

ENTRY FORMS DUE :- ~~NOVEMBER~~ ^{OCT.} 1ST, 1961. Please write to: HORST SCHIMMELPFENNIG,
GUDENARDER STR. 8,
D - 1000 BERLIN 65,
WEST GERMANY.

Entries to be received by, THURSDAY, NOVEMBER 12th, 1961.

AIR FREIGHT: Please send to: HORST SCHIMMELPFENNIG - ADDRESS ABOVE.

MARK ON OUTSIDE OF BOX - CALL ON ARRIVAL : Horst Schimmelpfennig. Tel. no. 455 18 55
OR : Gunter Tischmann. Tel. no. 411 76 38

We do not have the classes and rules as yet but when they are available I will publish them, along with the details of the English log of the competition.

The delight of fishkeeping has only been with me for an all too brief five years, but, during that time, one fish has occupied most of my efforts and presented the biggest challenge - THE GUPPY. In this article I hope to pass on some of my observations about keeping, breeding, showing and improving your Guppies. In those of you who find these observations "old hat", apologies; to those who are beginners and/or, I just might save you years of frustration.

Historically speaking, Guppies were not the first Livebearers to be discovered, that honour fell to Anabara in 1738, followed by Mollies in 1769. The Guppy was found in 1859, the first specimens went sent to the British Museum in 1866 by the Rev. Robert Lechmere Guppy, from whom the name, probably French, was taken. Nicknamed the "Millions Fish" when its prolific breeding habits were discovered, it was not as an aquarium fish that it first found fame, but rather as a mosquito larvae destroyer in the little island of Malindi. It was left to a Captain Vipon in 1905 to be the first person to keep Guppies in aquaria. It is because of the Guppies suitability as a prolific, voracious, gregarious, active and hardy aquarium fish that it has developed so far in only 70 years. It is interesting to view the development of the Goldfish and Carp over many centuries and imagine what Guppies might be around in the year 2150.

To help understand the conditions needed to raise most tropical fish successfully, it is useful to know something about their natural surroundings (or home), alkaline water for Malawi cichlids. I do not believe that this is necessary to raise good Guppies. The fish we buy today are very far removed from the guppy as it is found in nature. Our aquarium fish bears little resemblance to the wild ones from Brazil, Greece, Venezuela, Barbados and Trinidad, found swimming in fresh/brackish water, in slow flowing streams, streams and ditches. I think any good aquarist will raise good Guppies by keeping in Malindi or Rio de Janeiro, and he will do it by good basic fishkeeping. If you wish to raise Chow Guppies then you will have to accumulate and possess great experience and great PATIENCE.

Guppies need plenty of air, space, live food and algae. For that reason I keep female Guppies with air (aerator) in unacrowded, well planted tanks, with unobstructed filtration and feed them with as much Daphnia, White Worm and Mollusks as possible. Male Guppies, with their large bills if don't try to catch food by themselves usually kept on their own in tank tanks to minimise damage. I have found that a temperature between 72 - 78 F. to be ideal, they will certainly survive at higher and lower temperatures but do not breed so well outside that range. One useful tip concerning temperature is to keep Guppy fry at 80F to speed their growth and to keep mature fish at 68 - 70 so they last longer by slowing down their activity. If you must keep Guppies in the community aquaria, choose their companions carefully - Serpae Tetras can reduce six months work to hours in six minutes flat!!!

You will find a suggestion in many books that you harden the water (or add salt) to keep Guppies in, I can only say that I find this unnecessary and the effort needed to keep the water that way does not justify the results. One tip regarding female Guppies - If you want large, strong female Guppies then ensure that they do not become gravid - transfer said then done, and of course you will be unable to raise that strain if the female does not produce young. I think you will also find it difficult to breed from female Guppies that are more than four months old.

Much has been written about line-breeding and inbreeding Guppies and I do not wish to add my thoughts here, except to say that if you grow them fast, sex them early, select and breed from only the best and use good fish keeping habits, you will have good Guppies. You can even start by using a good pair (female and very useful male), transferring the female to a separate tank well before birth is anticipated and letting her produce in her own time. The young will be far bigger than those produced in breeding traps and if you feed often with Brine Shrimp and Spirulina work and do frequent water changes they will grow well. You can separate the sexes at three weeks by looking for the pointed anal fin of the male. If you leave this job for too long and your smallest male mates with all your females it can be very irritating. At three months, having eliminated slower growing or poorly coloured fish as you go, put your best pairs together and try to save the first batch of fry - these are usually the best.

A few words now about Guppy diseases etc: My biggest sin is still overfeeding. Female Guppies especially overeat every time if they can and then hang around the water surface with clapped fins - sometimes they don't recover. I am not so sure about the 'Hardy Guppy' statement which I am always reading. I rescued a sickly Guppy in a community tank at the first sign of an impending disaster and usually cut accordingly. After our last two Open Shows I have lost all my show females within three weeks, it cannot be coincidence and I think it is probably due to chilling.

Here then is ~~my biggest words~~ of caution - beware of part changing your water with cold water straight from the tap, I ~~say~~ ~~lost some super fish~~ that way, chilling again I think. Incidentally whilst feeding fry with Brine ~~Shrimp~~ I do not bother to wash them free from salt and I have no trouble with fungus as I used to, probably ~~due to~~ the addition of some salt.

Finally, a healthy Guppy is a happy Guppy and a happy Guppy is a fish which feeds eagerly, is all over the tank, is not frightened by butters or fin nippers and is eating a varied diet including lots of live food and vegetable matter. ~~Now, what's that fine smelling white worm culture?~~

ANSWERS TO CROSSWORD FROM OCTOBER EDITION.

ACROSS.

- 3). Meter.
- 7). Balconia.
- 9). Guppy.
- 10). Soaps.
- 11). Spot.
- 14). Live.
- 15). Sword.
- 16). Deal.
- 17). Arrths.

DOWN.

- 1). Halfbooks.
- 2). Amalgam.
- 3). Wuvva.
- 4). Ton.
- 5). Platy.
- 6). Snails.
- 8). Xiphochorus.
- 12). Hydra.
- 13). Molly.
- 14). Lilia.

LETTERS.

I refer to the Chairman's remarks concerning *Jenynsia lineata* in the last issue.

I understand that research is going on in the U.S.A. concerning the one-sided aspect on this species. Having brought them to the U.K. in late 1978, with Mike Thomas, I have made observations on them in reasonable numbers since then.

1). It appears to me that the males are most definitely one-sided. Whether or not the females are is another question. It would seem that they are but it is not, I think, possible for Aquarists, with their limited studies, to determine this --- at the least one would need large numbers of specimens, a lot of time and a very good microscope.

2). Males can be watched, especially when with a female, and from this I would say that they are one-sided. If one female is placed in a small tank and males put in one at a time it usually takes only seconds before he attempts to copulate. The side he is on really is seen. He will attempt, if unsuccessful, to try again from the other side of the female, when his gonopodium will face the wrong way. There is a definite insertion of the gonopodium and I have many times sorted out "matching" pairs by this method. I have not yet observed a male moving his gonopodium to more than one side.

3). The fact that males try from both sides seems to indicate the one-sidedness of females as well. By testing males and females from the same brood, it also seems that there are usually about an even number of matched pairs. I emphasize, in the case of females, that only scientific examination would prove that they are one-sided, but they certainly appear to be.

4). I have distributed these fish to at least 40 persons. Of these, I informed so that he had difficulty in keeping them alive, about 50% have given me no news on them at all and, of the other say 20, I spotted them, at least 2 did not breed them at all, and 4 came back for replacement males, as they could not obtain pregnant females, their males all being of the same side. They fish were distributed in 'matched Pairs' or in batches of about eight fry.

5). I have recently had 1 female, which had previously given birth to several broods, in with 2 males which I picked out as being opposite to her. Over 3 months to December 1980, she has not become pregnant again. This is only 1 experiment but it does seem to point again to one-sidedness in both sexes.

Dave Chewright,

Essex,

In the aquarists catalogue of Livebearing fishes, we find a varied collection - the peaceful as well as the predator, the tiny with the large. Among the fresh and brackish waters of the Atlantic coast of Southern Mexico, British Honduras and Nicaragua lurks one of the aquarist's most unusual Livebearing fishes, Balonesox balizanus, the aquatic giant of the Livebearers. Its large size, bizarre appearance and ominous reputation always draws a large crowd of hobbyists when on public display.

In most cases, the wicked looking jaws are the first part to attract attention. In many ways, the fish resembles our common Pike, hence the popular name. The substantial curve to both the upper and lower jaws does not permit Balonesox to close them. As a result, row after row of fine teeth are easily visible, enhancing its appearance as a 'mean' fish. The overall coloration is olive green, flecked with regular rows of small black spots. In reflected light the sides show an iridescent green, and the large black area at the base of the tail is complemented by the large eye. The dorsal is set far back on the fish, but otherwise the fins are not outstanding. The anal fin of the male serves, as in all Livebearers as a gonopodium and in Balonesox it is rather large and well defined.

In their natural habitat, Balonesox are found in neither fast or stagnant waters, but rather along the banks of slowly moving streams, mangrove and reedy swamps, and inlets to salty bays. In the aquarium, an addition of salt is sometimes helpful to prevent fungusing of bruises, but I do not find it necessary with my fish. They seem to prefer dirty to clean waters, and will planted to open spaces. Balonesox have even been found in areas completely covered with algae, and in cattle watering holes. In these ubiquitous surroundings, Balonesox are discovered near the water surface, preying on small Characin-like fishes.

An interesting account of the collection of Balonesox in the wild was given several years ago by James D. Thiele of Miami, Florida. Writing in Aquafocus, the publication of the Aquatic Researchers of San Antonio Fish Club, Mr. Thiele described the experience as follows: "On March 17th, 1955, a four man fish-collecting expedition for the Navy and the University of Miami, left that city by plane for Havana, Cuba, enroute to Merida, the capital city of Yucatan, Mexico. The object was to collect living specimens of Balonesox balizanus. The fish were to be used in a research program conducted at the department of Microbiology, University of Miami, under the contract to the Office of Naval Research."

"Arriving in Merida, Yucatan at about 6 p.m. on March 17, we wasted no time in making preparations for collecting Balonesox. At 6 a.m. on March 18th, the four man team started for Progreso, Yucatan by Automobile, loaded with all our equipment. Our destination was a series of small rivers just outside the city limits of Progreso - information supplied to us by Dr. Luis Rivas of Miami University. Upon arrival, we observed the area and discovered a few specimens of Balonesox. With a large dipnet, we quickly captured a nice pair which were placed in an aquarium so that our guides could be sure of what we wanted."

"They assured us they were familiar with Balonesox and told of a large, freshwater spring where they were extremely large and plentiful. Our present location was almost pure salt water, so it was decided to try out the Centa. After a lengthy trip upstream and then overland, we arrived at the site. Careful observation and search of the area turned up Pomilia vellifera, Astyanax mexicanus, Glyphisoma nassii, G. otophthalmus, Gambusia and Cyprinodon, but no Balonesox. We then struck downstream. In a very narrow stream about two miles long we ran into many Balonesox, but the heavy jungle growth made it very difficult to catch them. After about four hours, we managed to capture some fifty specimens. It was nearly 4 p.m., so we decided to return to the car and back to Merida."

"In the hotel we set up plastic bags in boxes and made up an emergency air system connected to an oxygen tank. We decided to use this oxygen only in an emergency case and, if possible to save it for the return trip to Miami. The next day, March 19th, we collected about 25 more specimens of Balonesox and about 20 more P. vellifera. We did in some more photography and returned to the hotel about 3 p.m."

"For the rest of the afternoon we just turned tourist and visited the interesting places in Yucatan. At 9 p.m. we came back to the hotel and were greatly alarmed. A foul odor hung about the room and almost all the fish were gasping for air. This was an emergency, so we turned on the oxygen. Within an hour, all the fish save for A. P. vellifera were in perfect condition and so the oxygen was turned off. The next day we packed the fish in plastic bags, filling the air space with oxygen, and placed them in boxes for the return trip. On our trip back to the University, our prize female Balonesox gave birth to 116 young as we changed planes at Havana. Upon arrival at Miami, we had lost only 1 large male and 1 of the new born fry. We considered our trip very successful."

Perhaps the earliest of the American aquarist reports about the maintenance and reproduction of Balonesox was that published in the April 1950 Issue of "Aquatic Life". The article, entitled "Notes on Balonesox balizanus" was written by that fishery pioneer, William E. Schaumborg, of Crescent Fish

from New Orleans, and is re-produced here in parts: "At the time these fish were received they were about 2 1/2" long, and careful examination convinced us that four of them were females. In this section of the country, every pool and body of water abounds with Gambusia affinis, so our food problem was an easy one. By December they had grown to a big size, the males attaining a length of 4 1/2", while the females had reached a total length of 5". We also noted that the females were gravid, so they were placed in separate tanks and fed plentifully".

"On January 12, one of them gave birth to 22 young. The female was placed back with the males 2 days later, and on February 28th, one month and ten days after her first young were born, she gave birth to 44 young. Another female gave birth to 20 young, and the third had 16 on her first delivery. The last two have not had their second litters yet, but will in a week or ten days."

"The birth of the young was quite interesting. They were born at intervals of from 10 - 15 minutes, the first one head-first, the second one tail-first, and so on until the whole litter was delivered. This is nature's way of packing in the young, whose forepart of the body is larger than the hind part, comfortably in the body of the female. We sacrificed one of the young immediately after birth in order to obtain accurate data on measurements and found it to be 3/4" long." Contrary to expectations, we found that the female was not disposed to eat the young, in fact, we noticed that she stopped eating 2 days before the delivery. The fry took large daphnia and mosquito larvae the day after birth. The growth of the fry is undoubtedly fast. The young born on Jan. 18th are by now (March 4th) 2" long. Because of the odd weather which caused a shortage of extra small Gambusia, they are fed on alternate days. We are going to try a later litter, when young Gambusia are plentiful, with a daily ration and see what growth is made. I predict a triple growth in 90 days"

"The fish are an interesting Livebearer and will make a valuable addition to any collection, but they cannot be kept with any small fish".

My own specimens range in size from 4 - 6 inches for the females and 3 - 4 inches for the males. (The largest size reported for this species is 8" and 5" for the female and male respectively). At first they were kept in a 29 gall. aquarium, but needing the space I transferred them to a 10 gall. tank. During an effort to feed them earthworms, whiteworms, dry and frozen foods, the Balonox took no nourishment for almost 2 weeks. At no time did they molest each other despite the disparity in sizes. Finally it was considered advisable to resume their normal fare of adult Guppies, fortunately my work in linebreeding various strains provided me with enough culls to feed the Balonox. The temperature of the aquarium that houses them fluctuates between 75 and 90F, with no evidence of discomfort to the fish. 2 of the females presented me with batches of young, enabling me to study them under aquarium conditions. The first batch was not long in being devoured by the parents, contrary to Mr. Schaubert's experience, but the second was saved by the analiment afforded by a handful of Anecharis thrown in for just that purpose. Each batch numbered about 40. 1/2" baby Balonox, resembling little sticks, their sides were marked with a black stripe. The dorsal and anal fins were orange-tinted, and although they lacked the huge jaws of the parents, they did have an enormous eye. The feeding problem was easy in this case, for the young ate frozen brine shrimp and frozen daphnia from the start. German aquarists, who have known this fish since 1909, have stated that the young are compatible, but my observation indicates otherwise. I passed time a photography session in life to see a week old Balonox grab a companion by the middle of the body. After struggling for over 20 seconds, the victim managed to free itself, minus a good number of scales. As an experiment, I placed a young guppy, 2/3 the size of the baby Balonox in their tank. Within a minute, a baby Balonox grabbed it around the middle, tossed it and had it swallowed. Over the succeeding weeks, however, I was able to train the Balonox to eat ground, frozen beef heart. This was a great relief as I was fast running out of Guppies.

Balonox balizanus is a fascinating fish, definitely one of those "different" Livebearers. As much as I do not like to inject a sour note here, it should be mentioned that the species is one of those on the restricted list in the State of Texas, and aquarists wishing to keep Balonox there must obtain a permit for them and presumably for each one of the young that may come along in life. To further compound this nonsense, the State also requires notification in writing should the aquarist decide to get rid of his Balonox What food does contain be!

NEWCASTLE GUPPY & LIVEBEARER SOCIETY

Meetings held at:- THE NORTH & HIGH HEATON LEGION CLUB,
404, CHILLINGHAM ROAD,
HEATON,
NEWCASTLE UPON TYNE.

Meetings start at:- 8.00 p.m.

SCHEDULE OF MEETINGS.

January	12.	July	30.
"	26.	August	13.
February	12.	"	27.
"	26. - CLOSED SHOW - CULTIVATED SPECIES.	September	10. - CLOSED SHOW - CULTIVATED SPECIES.
March	9.	"	24.
"	23.	October	8.
April	7.	"	22. - ANNUAL CLOSED SHOW - ALL SPECIES.
"	21.	November	5.
May	4.	"	19. - CLOSED SHOW - A.O.S. SPECIES
"	18. - CLOSED SHOW ! A.O.S. SPECIES.	December	3.
June	2.	"	17.
"	16.		

JANUARY 14, 1902 - REVISION OF RULES.

JANUARY 28, 1902 - ANNUAL GENERAL MEETING.

SOCIETY RULES.

The Society shall be called the Newcastle Guppy & Livebearer Society.

OBJECTS & AIMS. The promotion of interest in keeping and breeding all types of Livebearers and co-operation with all kindred Societies.

The Society shall meet fortnightly at a time agreed by members. A schedule of future meetings to be listed and a copy issued to each Member.

A.G.M. To be held on the second meeting in January for the election of Committee members. The Committee to consist of President (5 year term), Chairman, Vice-Chairman, Secretary, Treasurer, Librarian & P.R.O. (1 year term). Only attending members are entitled to vote.

No member of the Society can be nominated to serve on the Committee in that person's absence. Nominations for Committee posts will be put forward at the meeting before the A.G.M. No person can be elected to the Committee at the A.G.M. in that person's absence, without that person's written consent. Any post not receiving a nomination can be filled at any future meeting.

SUBSCRIPTIONS. Subscriptions will be paid by all members in January of each year. If not paid by the A.G.M. the membership will be lapsed.

MEMBERSHIP FEES. £1 - 50 per annum for all members. (This fee may be changed by the residing committee if circumstances warrant it)

Room rent of £0 - 05p to be charged to all persons attending.

Receipt slips to be issued to each member.

Lapel badges to be made available to all members requiring one. A charge to be made to cover the cost.

Panel of Judges & Trainee Judges to be set up from members that the Committee deem capable, and who are willing to do so.

Any member, corresponding or local, who attends a meeting is entitled to vote.

13. All table shows will be run in accordance with F.B.A.S. Rules.
14. A closed show to be held 4 times a year. A closed Annual Show to be held in October each year. All Committee members shall automatically become members of any Open Show Committee.
15. The Committee shall have the right to refuse membership.
16. Any area sub-section of the N.G.L.S. shall be responsible for its own finances. The N.G.L.S. shall not be held liable for any debt incurred by sub-sections.
17. OTHER MATTERS. Any matter not provided for in the rules shall be dealt with as the Management Committee may determine. The decision of the Committee is final.
18. As rules pertaining to the Society are agreed by a majority vote of attending, paid up members, NO RULE CAN BE IGNORED, ALTERED OR DELETED, BY ANY OR ALL OF THE RESIDING COMMITTEE. (Except rule 7) The rule or rules can only be altered or deleted by a majority vote at the A.G.M. (Notice of Motion must be given in writing at least 14 days before) OR AT AN EXTRA ORDINARY MEETING, CALLED BY 3 MEMBERS GIVING 14 DAYS WRITTEN NOTICE OF THE EVENT.

SHOW RULES.

1. Entries must be the bona-fide property of the exhibitor.
2. Exhibitors must be paid up members of the Society.
3. Professional aquarists are allowed to show fish at any closed show within the Society, but cannot compete for the Society in Inter-Society Shows.
4. Fish to be shown in square jars or tanks, one fish per jar, (exceptions are- Breeders Class, Matched Males, Breeding Pairs, or any other special exhibit or class that may be specified at a future date). Any exhibit shown in round jars or bowls are automatically disqualified.
5. A Breeders Class to consist of 4 fish, (2 pair or 4 of the same sex) bred by the exhibitor and not over 14 months of age. Spawning date must be shown on the container.
6. Breeding Pairs must be true pairs. A gravid female in these entries can disqualify the entry. Judges to use their discretion.
7. Matched Males must be 3 fish from the same brood, matched as near as possible for size, colour, condition etc.
8. Award cards shall be given at all Society shows. If only 3 entries are benched then 3 cards must be awarded, 2 cards = 2 entries, 1 card = 1 entry.
9. However small the number of entries in each class, amalgamation is not allowed.
10. Points awarded in jar shows are as follows:- 1st = 6 pts; 2nd = 4 pts; 3rd = 2 pts; and 1 point for showing, irrespective of gaining a place.
11. Judging at all Closed Shows will be done by members of the Society who are willing to do so, or by guest Judges.
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EXCHANGE COLUMN.

Mr. G. Chestney,
8, King St.,
Wath Grou,
CLEATOR,
Cumbria. CA23 3EJ
Tel. no. Cleator Moor 81199

NEW MEMBER - Interested in obtaining 5 Spots &
Ameas splendens.

Mr. R. Lee,
20, Brookside Rd.,
St. Johns,
Worcester.

offers - *Alfena pultratus*, *Besoh. rhabdophora*, *Het. bimaculata*,
Jan. lineata, *Poec. dominicensis*, *Prilapella compressa* (male)
+ other more common species.
will sell & post on exchange for:- female *Prilapella compressa*, ant *Xiphognathus* species
except *variatas*, *maculatus*, *hollandi* or *milleri*,
unusual Liliads.

Mr. Brian Fleming,
15, Cherry Rd.,
BONNYRIGG,
Midlothian.

Interested in obtaining 5 spot Livebearers.

Mr. G. Johnston,
3, Renshaw Drive,
Westwood Park,
NEWMALL,
Burton-on-Trent,
Staffs. DE11 0RY.
Tel. no: Burton-on-Trent 214498.

Interested in obtaining some young stuck from a
good strain of Gold Vegeta Plates.

Mr. G.H. Whitley,
47, Lynwood Rd.,
BLACKBURN,
Lanes. BB2 6HP.

Interested in obtaining any *Lilia* species, also
Livebearer sifdae.

Mr. G. Gordon,
119, Viosera Rd.,
ST. BIDEAU,
Plymouth.

offers - 2 almost adult female 2 spot Livebearers (*Het. bimaculata*)
wants - 1 almost adult female *Xiph. xanthocoma*.

Mr. A. Stevens,
5, Longdale Rd.,
DARLINGTON,
Co. Durham.

Interested in obtaining a female *Besoh. j-granithus*.

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MRS. J. BENTON, 'HALPBREAK HOUSE', 146, CHILLINGHAM RD., WENTON, NEWCASTLE UPON TYNE, NE5 5BU.

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