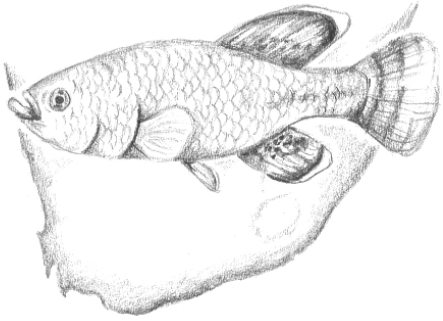
SOUTHERN AFRICAN KILLIFISH SOCIETY



Valued Killi Keepers

This is the third edition of the Southern African Killifish Society Newsletter. Again there has been no response from the upcountry killi keepers, I have however decided to continue with another free for all edition. I am reconsidering the current status and will be making adjustments to the membership plan.

Affiliation with Australia and New Zealand

The National Australian and New Zealand Killifish Associations (NAKA and NZKA) have agreed to affiliate themselves with us and Ryan and I have decided to reciprocate by affiliating ourselves with them. This affiliation will aim to not only improve killifish relations between our three regions but also to encourage an active exchange of information, and where legally possible fish as well. This affiliation promises to do much for our hobby.

There are plans for a joint website, or at least a website which will link to all of our respective sites. The information exchanges will initiate with the exchange of written information. As such SAKS will borrow articles from their journals for publication in the SAKS newsletter and we in turn will lend out articles to them for publication in their respective journals. Later if not immediately we will begin membership exchanges. This brings me to the next issue…

Member's contributions

I once again encourage every one to contribute. Be it a short letter, article or even a question. Even more appreciated would be list of fish and/or eggs you wish to trade with.

In the issue there will be a few short articles all by me... A few articles were promised by other member but they never arrived in time…

Promoting Killifish and SAKS

Again I must ask you to try and promote the killifish hobby in Southern Africa by trying to distribute fish.

Fish and Egg listing

Tyrone Genade, No. 5 Concord, Kerk Straat, Stellenbosch, 7600

Aphyosemion australe, heterozygous for the spotless-orange genes (yielding the so called Bellstedt Gold as seen on the SAKS home page),	R50/ws
Epiplatys dageti monroviae	R25/ws
Fundulopanchax gardneri "N'Sukka"	R25/ws
Nematolebias whitei "Barra de Sao Joao"	R50/ws
Nothobranchius melanospilus "Mvumi TAN 00/11"	R50/ws
Nothobranchius rachovii "Biera 98"[1]	R50/ws

Non-annual spawns are for a duration of 2 or 5 days and number between 20 and 40 eggs while the content of a Notho ws (week's spawn) is undetermined but normally has more than 50 eggs.

[1] NB: *N. rachovii* is a blacklisted species and will require special permits for it to be kept. These permits are obtainable from the local board of Nature Conservation.

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Eggs to trade: Aplocheilus lineatus “Gold” for any non-annual

Conclusions

In spite of the poor response received from the last newsletter I have followed the advice of those who did respond and send out this third free edition. While I am happy to continue along this line I do not feel it is fair to those who have paid and are benefiting from the newsletter. I must ask all those who are interested please pay your dues and help keep this society alive. Also, if you know of other killi keepers please let them know about SAKS so they can get in touch with me!

In the next issue I hope to include a recent article from the National Australian Killifish association Journal on how to keep “cool-killies” alive under the hot Southern Hemisphere sun!

Kind regards

Tyrone

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SAKS Letters

Killifish and the Law

According to Cape Nature Conservation the movement of killifish or eggs over provincial and state lines requires a permit. These permits are obtainable form your local board of nature conservation. If you are caught there is a stiff fine!

While no doubt you have engaged in trade before without a permit and will certainly do it again as the risk of being caught is so low, to all intents and purposes I consider the permit issue mute. What is important it that we stay away from killifish species that are black listed. These species are:

Aphanius burduricus
Aphanius chantrei
aphanius dispar
Aphanius fasciatus
Aphanius iberus
Aphanius mento
Aplocheilichthys katangae
Aphlocheilichthys meyersi
Aplocheilichthys normani
Aplocheilichthys pumilus
Aplocheilichthys rancureli
Aplocheilichthys schoelleri
Aplocheilichthys spilauchena
Cynolebias constanciae
Cynoprinodon variegatus
Cyprinodon macularius
Cyprinodon nevadensis
Cyprinodon variegatus
Fundulus catenatus
Fundulus chrysotus
Fundulus cingulatus
Fundulus diaphanus menona
Fundulus dispar dispar
Fundulus grandis
Fundulus hetoroclitus
Fundulus majalis
Fundulus notatus
Fundulus notti
Fundulus spp
Fundulosoma thierryi
Hysopanchax spp
Jordanella floridae
Leptolebias ladigesi
Leptolebias minimus
Leptolebias marmoratus
Leptolebias opalescens
Leptolebias splendens
Nothobranchius kirki
Nothobranchius kuhntae
Nothobranchius orthonotus
Nothobranchius rachovii

From the list it can be seen that there are relatively few species black listed and NO *Aphyosemions* type species listed. Of note is the various *Cynolebias* and *Leptolebias* species listed. These pose a valid threat. Experiments have shown that their eggs are very resistant and can last up to two years in the ground. They are also temperature tolerant, standing temperatures down to freezing. Under no circumstances should these fish be brought into the public trade and any *Cynolebias* species imported should not be distributed to people who do not know what they are doing. Of the five *Leptolebias* species *ladigesi and minimus* are synonymous and for all intents and purposes *opalescens* and *splendens* can also be seen as synonymous with *minimus* as no doubt this list was drawn up using the taxonomy of Myers which viewed them as all the same species (even though they are not).

On the list are various *Nothobranchius* species. Some of these are indigenous and so fall under the protection of indigenous species act and cannot be traded without a special permit. For some fish such as *N*. *rachovii* the permits are worth their while.

Please do not import black listed species.

Five ways to deal with *Aphyosemion australe* eggs

Aphyosemion australe is a pretty little fish with a nice disposition and fairly straight forward means of reproduction was it not for the sequential hatching issue. The latter issue is of cause of no importance if your *australe* just won't lay eggs. This is however very rare.

Aphyosemion australe's eggs can be picked from mops and hatched in water or incubated in peat. They can also be spawned over peat and incubated in the same. In this regard *australe* are pretty versatile. Water hatching normally take two weeks while peat incubation takes four. There are various tricks and trade offs associated with either method. Each will be discussed in tern.

Picking mops and water incubation

We all know how to pick eggs from a mop? For those of you who don't here is the way to do it: Take the mop out of the tank, gently wring it dry. Then leave it to dry for about 10 to 15 minutes. Wash your hands and then carefully examine the mop for eggs, picking each egg off gently between your fingers and placing it into a container of tank water.

This is where water incubation begins. If you have a nasty bacteria around that eats eggs then adding some acriflavine or the like will help. The author is fond of Tetra's General Tonic that he uses at half the recommended dose. Acriflavine and malachite green are dyes, the former being a tanning agent too. They will damage eggs if used at too strong a dose. Some methylene blue can be added as well to help with oxygenation (methylene blue is of questionable use as an antibiotic). The eggs are best incubated in shallow trays for the same reason for which the methylene blue was added. Keeping the eggs well oxygenated cannot be over stated (Huntley, pers. comm.). Frequent water changes should be made and any dead eggs removed. After the eggs are developing healthy, treatment with antibiotics can stop.

Incubation takes about two weeks. If the eggs were picked one day after another then you will end up with a large group of fry of several different sizes. Fry which are only two or three days apart are not a worry. The fry size issue is a major pitfall of this method. Egg loss can also be very high. On the up side, incubation is quite short.

Picking mops and incubation on peat

Same as before, dry the mop, pick the eggs, place in container of water with antibiotics. Here are how things change:

Before hand you will of prepared a bed of damp peat (moss or fiber) in a sealable container that no light can penetrate through. On this bed of peat gently place the eggs you have picked. This can be done by hand "("very difficult) or the eggs can be picked up with a pipette and dropped onto the peat. Now the wait begins.

Incubation will take more or less four weeks. Along the way the dead eggs will have to be removed and the container aired.

This method has the benefit that the eggs are kept apart and so any bacteria cannot easily spread. If however the peat is too damp the bacteria can spread just as easily as before. In conjunction the humidity has to be right and the temperature too. Another benefit is that if the container is kept dark the eggs can be left, fully incubated, till all the eggs have eyed up and are ready to hatch.

While the author has used this method several times he is yet to get any fry.

Picking mops and incubation in peat

Same as before except here instead of placing the eggs in a container or water and antibiotics the eggs are placed into a container of watery peat. The peat is then poured though a net and dried to a semi dry state (like pipe tobacco) and stored for four weeks. The

author will often pick eggs each day and pool the peat and then incubate for four and a half weeks. At the end of this wait the peat is wet and the fry taken form the hatching container. The author has had excellent yields with a minimum of fuss.

The eggs could also be left in the watery peat to incubate. A deeper water level is required for this. The author has also had great results but has found the fry difficult to fish out of the peat, especially if it has to be done every day as the eggs are now hatching sequentially again.

The antibiotic nature of peat is not to be understated. The tannins and acids can stop a lot of the bacteria that normally devour a clutch of eggs.

Pulling and storing the mop

This is a rather novel idea that I picked up off the Internet. (The original email by Jay-Scott Moylan is up on the author's website under "egg incubation".)

In principle the mop is pulled form the tank, wrung dry and then placed in a plastic bag to incubate in the dark for four weeks. A replacement mop can be put in the tank and it can be pulled and picked (as described previously) each night. A week's eggs can be pooled on the one mop. The picked eggs are placed inside the damp mop and stored as before.

On using this technique the author had great success. The eggs developed normally and all hatched within five days on wetting. It does entail a lot if effort (the eggs won't stick easily to the damp mop) but has great dividends.

Spawning over and incubation in peat

This method can be a bit messy. A small tank is set up with a substrate of peat. A large tub of peat can be sunk into the tank as well but this has never worked for the author.

The pair or group are left to spawn freely for a week and then the peat is siphoned off and poured through a net and the resulting peat dried as described previously. The peat is then incubated for four weeks.

This method is used mainly as a last resort if you suspect that your fish are eating their own eggs. It can have a high yield (rumors of 200 fry are not unheard of).

There is one other method that is totally hands off: a permanent setup. These fish will not eat all their fry. The author has raised fry with their parents and so have other people. The yield is not so high though. Another way is to simply spawn the group in a tank and then take the group out a week later and watch the fry emerge from the plants.

How you choose to treat the eggs of your *Aphyosemion australe* is up to you. No doubt your choice will rest on what works for you and what is easiest.

References

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