Developing the High Fin Mayae

By: Greg Sage, www.selectedaquatics.com
All Photographs by the Author
American Livebearers Association, December—January 2011

In 2004 I received a bag of 6 young *Xiphophorus mayae* from another hobbyist that I knew well. My interest in them developed from having been told they were the largest-bodied swordtail in the world and that they had only been recently identified. I had been keeping another large swordtail, the *Xiphophorus montezumae* for a few years and I wanted to continue with trying to raise the largest swordtails I could obtain.

Given a single species tank of at least 30 gallons with lots of live food, the mayae did very well. They are a shy fish, often preferring to stay hidden in the plants whenever they feel threatened. I generally remove females when they become gravid, putting them into a 10 gallon tank with lots of Java Moss to raise up the young separately. They thrive on frequent water changes and some water movement, which I provide by using simple box filters for filtration. I keep them in bare bottom tanks with floating plants (Java Fern, Java Moss and Bolbitis Fern), or clay pots with plants potted in peat (Amazon swords, Crypts, etc.

Though I keep other swordtail species in my fishroom, I do not have any developed high fin fish. On one occasion I had a high fin male sent to me along with other fish which I then gave away to another hobbyist, but I have not kept a high fin line in my fishroom.

These new mayae reached maturity and were soon dropping fry. I have always had an interest in spotting albino or leucistic fry, so with new batches of young I usually observe them fairly closely and at some point, I truly don’t remember the exact date, at about a month old a fry was spotted with an exaggerated dorsal fin. It appeared to be undersized overall, so I pulled what turned out to be a female and put her in a breeder to make sure she ate well and I could keep an eye on her.

Having a fish appear that seemed to be “mixed” is a serious cause for concern. Who could have gotten in with the mayae? And not just been mixed in but had been in the tank long enough to mate with one of the females? And why had I not see it? My fishroom is about 60 tanks, I have a number of species but there is nothing with a high fin. I went over whether I had any fancies that could be carrying the high fin trait but did not show it. Nothing came close.

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**Upcoming Events**

**March 8, 2011**: Udo Rohmann will speak on the Hamburg Mattenfilter (HMF), filtering system.

**April 12, 2011**: Barry Mckee & Doug Chessel on their trip to South America.

**May 1, 2011**: Spring Auction

**May 10, 2011**: To be announced.

**June 14, 2011**: Elections

**July/August**: Summer break

**September 13, 2011**: To be announced.

**September 25, 2011**: Fall Show & Auction

**October 11, 2011**: To be announced.

**November 8, 2011**: To be announced.

**December 6, 2011**: To be announced

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President’s Message

This month’s guest speaker will be Udo Rohmann doing a talk about the Hamburg Mat Filter. How to construct it and use it with a hands on demonstration. Udo has been in the hobby for over thirty years. He currently keeps African, Central American and South American Cichlids, Live-bearers, various Catfish, Invertebrates and Plants. Udo has thirty four aquariums with a total of 1450 gallons. Tanks range from two gallons up to three hundred and fifty gallons. I trust this will be very interesting for all.

Last month’s meeting we had Brian and Susan Glazier doing a presentation about Killies. It seemed everybody really enjoyed the evening. Thank you for a great job.

The CARES program has taken off quite well so far with ten people filling in their paperwork. Please submit it to Annette as she can get it forwarded to the powers that be.

The jar show for this month will be Mollies and Platties with the open class and as usual there is the plant class. As always we will have the auction and last month we had over 100 items and a lot of people got some good deals. Please bring out your extra fish and plants for the auction. Who knows you may pick up a bargain or two.

Have a great St. Patricks Day

Go easy on the Green Water

Ron Bishop

The London Aquaria Society is a non-profit organization, established in June 1956. Its main objective is to promote interest in breeding and raising tropical fish and also to provide a means through which hobbyists may exchange ideas, gain information and display their fish, sharing them in the public in the London Area.

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Developing the High Fin Mayae  
cont’d from front page

Because I wanted to grow out these mayae to their potential, I had kept them in a 50 gallon tank of their own and they had never been moved. The tank they were in was high up on a stand without tanks next to it, so other fish could not have jumped across—the reason I keep all similar species far apart from one another. I do keep a large number of Xiphophorus alverezi, a similar looking fish when younger but they were not near the mayae tank and besides, they did not possess a high fin dorsal. It did not appear that this fish could have picked up the trait from another fish in my fishroom.

If the fish were a simple cross with a high-fin X. helleri, it would not be of interest and it’s breeding program would be dictated by already well understood genetics. For it to appear “spontaneously” within a species implies an entirely new appearance of a genetic trait that had not previously existed, which then became of great interest. Is a double dose of the gene lethal? How does it affect other aspects of the fish’s growth? Could this be an entirely new gene? The fish I obtain are intended to be bred and shared with other hobbyists—if this was not a pure mayae, I needed to know that. I could easily start a contaminated line in the hobby which would continue to reveal other non-mayae characteristics besides not being the fish I was saying that it was. Wanting to develop a high fin mayae from having crossed it with an established X. helleri high fin line is something I did not have an interest in doing. If the provenance could not be determined, the fish would have to be destroyed to prevent it from entering the hobby as a pure mayae.

So, I needed to find out with some certainty whether the line was pure when I received it. I called the hobbyist I got them from, aware that the panic I had just been through was being passed on to him. He was positive that a cross could not have happened in his room either and he had only obtained them about 6 months before he gave them to me, so, he called who he got them from. We traced the line back 2 years and were ultimately convinced that an accidental cross could not have occurred. I spoke with a number of people about this fish and a group who felt they would be the ones to know such things agreed to meet me at the next ALA convention to take a look at them. I brought a pair and all agreed they didn’t look like anything they’d seen—certainly not an established helleri type high fin dorsal.

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The following year I brought a pair and put them in the show and that was the first time anyone had seen the fish.

I maintained my skepticism for a couple years, primarily because it would simply have been too easy for a cross to happen but a spontaneous appearance of a new gene could not be considered lightly. Until it could be proven to be otherwise, I felt that the simplest solution continued to be the most responsible explanation. However, as the trait revealed itself, the proof I was hoping for gradually presented itself.

When a single fish with a mutation appears, there is a way to develop more fish with that mutation. I have the minimal knowledge of basic genetics most of us share, having been familiar with the Punnet square diagram. When I see a fish with a mutation I wish to develop, I assume the trait is recessive in that I will not expect to see the trait expressed by the young of a breeding between that and a normal fish. Only after I determine that a fish with a new mutation is healthy do I attempt to breed it and occasionally a mutation may also be sterile. This female looked good and in fact became gravid, producing 2 or 3 drops of young before she died.

After being crossed with a normal fish, the mating of the young from that cross who carry the trait but do not show it, will produce young displaying the new mutation 25% of the time. A mating of two of those young that show the mutation should then begin to produce fish that are consistently showing the mutation. With swordtails, a generation is generally considered to be 8 months, so the appearance of a number of fish possessing the trait who are then old enough to breed will take approximately 16 months.

After the time it took to accomplish this, most of the fry were not growing out as expected. I was hoping for large Xiphophorus mayae, just like their cousins across the room but now with high fin dorsals. What I was getting were often little miniature fish. They were quite cute actually, with all of the colour and much of the finnage but they matured out early and topped out at between 2 and 3 inches. It occurred primarily with males, many of whom also possessed a long extended gonopodium, such that they were useless as breeders. I was getting concerned that they would be the only high fin fish I’d have to work with, so instead of culling them, I put them in their own tank to see if they would reproduce.

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Developing the High Fin Mayae

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I also knew that a new mutation may carry a number of other consequences and that ultimately the line may simply die out. These little fish didn’t reproduce and instead gradually died away within just a couple months. But there did continue to be occasional fish that grew out almost normally, though still moderately undersized when compared to the normal mayae. It was within the finnage characteristics of these fish that I was finally convinced that the high fin occurrence was genuinely spontaneous and not the result of an accidental cross.

Both sexes carry the high dorsal fin, though it can be dramatically different between individual fish and the basic female and male structures differed—the females possessed broader dorsals, often with the first 2 or 3 rays extended. The male’s dorsal fins were longer, thinner, almost banner-like and occasionally so long that they would extend out past the tail! There was no consistency and there were still many normal finned fish within each drop. My brief experience from working with fancies was that if the high fin had been the result of a cross with a well established high fin line of X. helleri, the finnage should be expected to show some consistency. That was not the case with this line. I was curious as to whether the normal finned fish within each drop would then be normal sized—I wanted to know if the high fin trait was linked to their also being undersized. If there were full sized normal finned siblings, they could possibly be crossed with better examples of the high fin fish to increase the overall size of the line. But though robust and healthy, only a few of the normal finned fish in my cull tank have come close to reaching full normal mayae size.

I watch these fish fairly carefully and rather than separating them by sex as soon as possible, I have been allowing them to grow up to sexual maturity together, first removing any early maturing males, then al normal finned fish. I try to move them infrequently and disturb them only when I have to. When certain individuals draw my attention for their overall size, broadness and height of the dorsal fin, as well as depth of colour. I pull them to become breeders. I make sure to remove males I do not want as breeders before they mature enough to breed. Females I select for a combination of overall size and size of the dorsal fin.

With each subsequent generation, they are in their 5th now, though the percentage is better with some females than others. I have a 50 gallon breeder tank with about 15 fully adult fish, 4 females that are currently regularly producing young. However, there are approximately 200 others in various stages of growth.

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Because of the line’s current inconsistency, I do not know how many will reach full size until it happens. I expect to see a higher percentage of genuinely full sized fish with the current generation growing out, though I expect the next generation may still come from about half a dozen pairs.

With each generation there has also been an increase in the overall size of the fish. Fortunately, my current breeders have been fairly prolific and do best when kept in groups of their original drops. From this I have also seen that the percentage of high fins within each brood does differ between females. I have also learned to be careful to release future breeders into the breeder tank only when large enough to fend for themselves, I have still lost fish when introduced at too young of an age. All surmise is that the longer finnage reduces mobility somewhat in their heavily planted tank and when competing with larger fish the smaller, younger fish don’t fare as well.

I do feel that they are at least two generations away from being somewhat consistent in their look and percentage of high fin young showing the trait.

I was recently approached concerning the potential for a “double dose” of the high fin trait possibly being lethal. All I can say is that I have been breeding high fin to high fin to produce the young I continue to work with. However, I have had times where very large females ultimately drop only 15 or 20 young –fish that of that size should be having brooders 2 or 3 times that size. This may imply lethality in utero, though I cannot say what this means for the high fin fry that survive.

I recently launched Select Aquatics (selectaquatics.com), personally breeding and selling many of the specialty fish we work with but often have difficulty finding, or that we need to wait for the next ALA convention to obtain. There are about a dozen species, including some swordtails and goodeids. These high fin mayae will be offered for sale at that site shortly.

Greg Sage copyright 2011

“The Matter of Light”

By: Alfred Betts, June, 1967, London Aquaria Society
Submitted by: Annette & Ron Bishop, January/2011

If you are one of those hobbyists that strive for perfection as far as the natural looks of your aquarium are concerned, you most likely are trying your best to grow different kinds of aquatic plants in it. There is no denial, that besides rocks, gravel or other decorations, a healthy growth of plants is the best thing that adds a final dress appearance to your aquarium. No doubt that there are many of you that have the natural “green thumb” for growing them but then there may be the ones that sometimes lose sleep over it.

I will not go into the subject of the usefulness of special plant food or soil mixtures but I would like to indicate the importance of proper light that is so vital for growth.

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Clown Loaches

Submitted by: Carol Hains, London Aquaria Society, March 2011

The other day Carol Hains called me concerning some strange goings on in her aquarium. It seems that her Clown Loaches were burrowing into the gravel. Here is what I found in the Loach Forum.

I have a 63 gal. tank. On Friday I changed all the substrate in the tank from 5-10 mm crushed sharp stones to 0,7-1,0 mm natural grain sand.

The major reason for this change was to make my gang of 8 clown loaches even happier. Now they can dig as much as they like in the sand and have fun. Also, I made the layer quite thick allowing me to have a network of PVC pipes in the sand for the loaches to hide in.

Due to this thick layer of sand I want to add sand snails. I have ordered 100 sand snails. I will add 70 of them to the 63 gallon at night when the loaches are sleeping. Any chances they will survive ? or will the loaches catch them faster than the sand snails multiply?

30 snails goes in my small catfish tank with 5* panaque maccus. I really don’t want gas "pockets" in the sand.

Answer: Once they figure out how to eat them they are all toast... nutritious and tasty snacks, that is.

I've got 100 gallons with deep sand and gravel mixed in a heavy current. I had a borderline overpopulation of a local invasive conical pond snail up to about 2 cm long plus tons of juveniles living with the loach (clown, one little guy at about 5 cm long). One day he (loach) figured out how to eat them. Today (less then 5 months) he's polished off the entire population but for an occasional hard survivor he pulls out of the plants.

Go with BIG snails strong enough to hold out. Don't expect too much successful snail reproduction and expect fat, healthy and happy loaches. They will love you for it though.

“The Matter of Light”
cont’d from page 7

Light, artificial or natural that reaches your aquarium from the sides is not doing much good to the plants, except that it generally induces growth of Algae on the glass or other objects.

Therefore, we may assume the light source that will do best for the plants should be located in an overhead position.

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Last photo taken of an idiot.
If you’re going to be dumb, you better be tough.

London Aquaria Society
The intensity or strength of the light as well as the distance of the source has a great deal to do with it but this is a basic problem that depends on the size and depth of your tank.

Here I would like to mention the different kinds of light available to us and how we can employ them best for our benefits. Sunlight as we see it and which to most of us appears to be white coloured light, actually consists of all the colours in the colour spectrum. A life giving light for all living creatures and plant life on earth has enormous complexity and man, so far, has not been able to duplicate it. However, there are several light fixtures on the market today that radiate certain satisfactory results of imitating a narrow band of sunlight. To avoid confusion by listing all the wonders of today’s scientific products, I am only going to mention those light fixtures that can serve best for our purposes.

1) Incandescent Light Bulb: Basically delivers yellow light with some red and orange.
2) Cool white fluorescent tube: Delivers white light.
3) Warm white fluorescent tube: Delivers yellow, red and orange light.
4) Gro-lux fluorescent tube: Delivers red and violet light.

By combining two or even three of these light sources under the aquarium hood, it will radiate a far broader band of light toward your plants than one kind of light source would. From there on, the biological chemistry will take over and your plants will do better because this sort of variety of light may be compared to that of the variety of food to them.

A good combination of such a multiple light source is ordinary, incandescent light bulbs one gro-lux tube. The person who would like to have more variety of light can add one cool white fluorescent tube to it.

An alternative of fluorescent tubes only, could be one warm white tube plus one grow-lux tube. Again, one cool white tube may be added to make it a threesome.

You should bear in mind to have these light fixtures of equal wattage to keep it more or less in balance condition. There is no need to keep all these lights on at the same time as they may be alternated periodically by the day or certain hours of the day. If you feel that your plants can stand a little more light, additional selections may be switched on occasionally. This sort of light fixture arrangement under your aquarium hood will cost more, of course, than those on the market and in most cases will require partial or complete rebuilding of the hood itself. However, the end results should be rewarding in a healthy flourishing plant growth.

So, if you have tried hard to grow plants in your aquarium but at times they seem to let you down, think it over.

By Emma Pelle
SAILFIN MOLLY

www.flmnh.ufl.edu/fish/gallery/descript/sailfinmolly/sailfinmolly.html

Order - Cyprinodontiformes       Family - Poeciliidae
Genus - Poecilia                Species - latipinna

**Taxonomy:** The sailfin molly was originally described in 1821 as *Mollienesia latipinna* by the naturalist Charles Alexandre Lesueur, oft noted as one of a number of persons instrumental in the founding of a well known experimental settlement at New Harmony, Indiana during the 1820's. Lesueur based his description of the sailfin molly upon specimens from freshwater ponds in the vicinity of New Orleans, Louisiana. However, Lesueur described other collections of the sailfin molly as *Mollienesia multilineata* in 1821, the same year in which he described *M. latipinna*. This conflict created confusion and eventually necessitated a ruling by the International Commission on Zoological Nomenclature (ICZN). In 1959, the ICZN placed precedence on the name *Mollienesia latipinna* Lesueur 1821.

A number of other synonyms exist, most of which are based on specimens from other areas of the sailfin molly's rather large native range. These include *Limia poeciloides* Girard 1858, *Poecilia lineolata* Girard 1858, and *Limia matamorensis* Girard 1859. In a landmark work on poeciliid fishes, Donn Rosen and Reeve Bailey (1959) noted the priority of *Poecilia* Bloch and Schneider 1801 with regards to *Mollienesia* Lesueur 1821, thereby relegating *Mollienesia* to the synonymy of *Poecilia*. Consequently, the proper binomial for the sailfin molly is *Poecilia latipinna* (Lesueur, 1821).

**Common Names:** Sailfin molly, Breitflossenkärpfling (German), bubuntis (Tagalog), Molinezja szerokpletwa (Polish), molliénésie á volure (French), and tabai (Hawaiian).

**Geographical Distribution:** The sailfin molly is found in fresh, brackish, and coastal salt water in coastal lowland habitats from North Carolina to Texas and the Yucatan Peninsula of Mexico. Preferring marshes, lowland streams, swamps, and estuaries, the sailfin molly is very common in peninsular Florida. Non-indigenous populations are established in the western U.S. and in Hawaii. Sailfin mollies introduced to California have caused a decline in populations of the federally endangered desert pupfish (*Cyprinodon macularius*).

**Habitat:** Sailfin mollies are most commonly observed in the shallow surface waters along the edges of marshes, lowland streams, ponds, swamps, estuaries and even ephemeral water bodies such as roadside ditches. Small to large aggregations of the species are most commonly found under floating vegetation or near structures in the water, minimizing their chances of being observed by potential predators.

The sailfin molly is a tolerant species. By exploiting the thin film of oxygen rich surface water with their upturned mouths, sailfin mollies are able to survive oxygen depleted habitats. A euryhaline species, the sailfin molly may be found in a variety of saline environments and will breed in brackish waters.

**Distinctive Features:** The body of the sailfin molly is essentially oblong. The head is small and dorsally flattened, with a small, upturned mouth. The caudal peduncle is broad and the caudal fin is large, rounded, and sometimes tipped with black. The pelvic fins originate at a point anterior to the dorsal fin. The dorsal fin is greatly enlarged in mature males and somewhat enlarged in females. It is this conspicuous and attractive feature that lends the species its prevailing common name.

Freshwater marshes provide habitat for sailfin mollies. © Cathleen Bester/FLMNH

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**Coloration:** The body is generally light gray, although breeding males may be greenish-blue. Several rows of spots occur along the sides, back, and dorsal fin. Often times these spots blend together or are very close to one another, creating an appearance of stripes. Aquarists have developed many color variations in this species, and indeed much variation occurs naturally in the wild, with melanistic and speckled forms known.

**Dentition:** Sailfin mollies possess many rows of very small teeth, the outer row of which are the largest.

**Size, Age, and Growth:** The natural lifespan of sailfin mollies, like other small poeciliids, is short, particularly in the case of the males, which may live less than one year after achieving sexual maturity. Depending upon environmental conditions sailfin mollies may become reproductively in less than a year. Sailfin mollies are small fish. At one year of age males typically range in size from 15-51 mm SL while mature females are likely to be approximately 19-53 mm SL. The sizes of adult males is directly correlated with population density. The greater the population, the smaller the average size of males. The maximum recorded size for this species is 150 mm TL.

**Food Habits:** Sailfin mollies feed primarily upon algae and other plant materials, although they will consume a number of aquatic invertebrates including the larvae of mosquitos.

**Reproduction:** Female sailfin mollies tend to be larger than males, a disparity typical of the Poeciliidae. Males exhibit large and colorful dorsal fins in addition to a colorful caudal fin and these conspicuous secondary sexual features play a role in female mate choice. Fertilization is internal and is accomplished by means of highly modified fin elements within the anal fin of males that form a structure known as the gonopodium. Sailfin mollies produce broods of 10-140 live young, depending upon maturity and size, and females may store sperm long after the demise of their relatively short-lived mates. The gestation period for this species is approximately 3-4 weeks, depending upon temperature, and a single female may give birth on multiple occasions throughout the year. Although sex ratios of the broods are balanced, adult populations tend to be largely female as males appear to suffer higher rates of mortality due to a greater susceptibility to predators and disease as a consequence of their showy breeding dress and a life spent largely in a frenzy of breeding. There is no parental care exhibited by this species.

**Predators:** Sailfin mollies are small, numerous members of the lower end of the food chain. As such they are prey for numerous animals including aquatic insects, other fishes, reptiles and amphibians, birds and mammals. Specific examples of such creatures include, giant water bugs (Belostomatidae), largemouth bass (Micropterus salmoides), American alligator (Alligator mississippiensis), bullfrog (Rana catesbeiana), snowy egret (Egretta thula), and raccoon (Procyon lotor).

**Parasites:** The haploplorid trematode, *Saccocoelioides sogandaresi* is a known parasite of the sailfin molly.

**Importance to Humans:** The sailfin molly, in its many color varieties is of considerable interest and value to aquarists and many artificially selected varieties are produced and sold in pet shops. Naturally occurring populations of sailfin mollies may help to control mosquito populations by feeding on the larvae and pupae of these pests.
Spawning Corydoras sterbai

by Charles Drew
From the Monthly Bulletin of the Hamilton Aquarium Society
Aquarticles.com

Corydoras sterbai is a very attractive catfish which comes from the Upper Rio Guapore River in Brazil. It is often confused with Corydoras haraldschultzi which is an equally attractive fish from the same region. The experts tell us that the C. haraldschultzi has a light body and head with dark spots and lines. C. sterbai has a dark head and body with light spots and lines. It brings to mind a Zebra, white with black stripes or black with white stripes. There is a definite difference in the two fish and they are often found mixed together in store tanks or wrongly named. Over the years I have seen or heard of them being spawned by aquarists on the rare occasion, but never on a regular basis.

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**Jar Show Fish Results**

<table>
<thead>
<tr>
<th>Name</th>
<th>Month</th>
<th>Fish Name</th>
<th>Sponsor</th>
<th>Award</th>
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<tr>
<td>Bob Steele</td>
<td>February</td>
<td>Wood Catfish (<em>Tatia perugiae</em>)</td>
<td>Pet Paradise</td>
<td></td>
</tr>
<tr>
<td>Bob Steele</td>
<td>February</td>
<td>Gold Gourami, male (<em>Trichogaster trichopterus</em>)</td>
<td></td>
<td>Red</td>
</tr>
<tr>
<td>Bob Steele</td>
<td>February</td>
<td>Betta, male, pink, red and orange (<em>Betta splendens</em>)</td>
<td></td>
<td>Blue</td>
</tr>
<tr>
<td>Bob Steele</td>
<td>February</td>
<td>Betta, male, red and blue (<em>Betta splendens</em>)</td>
<td></td>
<td>White</td>
</tr>
<tr>
<td>Bob Steele</td>
<td>February</td>
<td>Betta, male, red (<em>Betta splendens</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liz Schnare</td>
<td>February</td>
<td>Betta, male, red and blue (<em>Betta splendens</em>)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bob Steele</td>
<td>February</td>
<td>open Wood Catfish (<em>Tatia perugiae</em>)</td>
<td></td>
<td>Red</td>
</tr>
<tr>
<td>Liz Schnare</td>
<td>February</td>
<td>open Albino African Clawed Frog (<em>Xenopus laevis</em>)</td>
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<td>Blue</td>
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<tr>
<td>Bob Steele</td>
<td>February</td>
<td>open Koi Angel fish (<em>Pterophyllum scalare</em>)</td>
<td></td>
<td>White</td>
</tr>
<tr>
<td>Nancy Egelton</td>
<td>February</td>
<td>open Half-black/Yellow Guppy, male (<em>Poecilia reticulata</em>)</td>
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</tr>
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</table>

**Spawning Corydoras sterbai**

cont'd from page 12

While at the Catfish Convention hosted by the Potomac Valley Aquarium Society in Laurel, Maryland in October 2004 I had the pleasure of meeting Ian Fuller the *Corydoras* catfish expert from England. During a question session with a panel of experts someone asked the question 'at what temperature do you spawn *Corydoras sterbai*?' Ian Fuller answered at 82 degrees F. That was the key and could well be the answer to other hard to spawn corys. Most of the commonly bred corys spawn in average hard tap water in the high 60's to low 70's as long as pH and DH are not extreme. But many beg to be different and finding the key to what triggers them is what you have to discover.

A week or two after arriving home from the convention a ten gallon tank came empty. I decided to capitalize on my newly gained knowledge. I checked my cory catch-all tank where I keep fish that I am not currently spawning or loners that I don't know what to do with. It was in this tank that I found three *C. sterbai* given to me by Paul McFarlane when he downsized his fish room for health reasons. I placed the three fish in the ten gallon tank and added a heater set at 82 F.

The water was mostly from my reverse osmosis (RO) unit which is a must have for real fish breeders. The only things in the tank were a box filter and a yarn spawning mop with a float. The fish were fed well on white worms, black worms, frozen brine shrimp and frozen bloodworms. After a month or so of good conditioning it became apparent when they were viewed from above that I had two males and one female. The female was obvious because her sides bowed whereas the males' sides were straight. Nothing much was happening other than one male would get amorous and tickle the top of the female's head with his whiskers after a water change.

cont’d on page 14

**Jar Show Plant Results**

<table>
<thead>
<tr>
<th>Name</th>
<th>Month</th>
<th>Plant Name</th>
<th>Sponsor</th>
<th>Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>James Kelly</td>
<td>February</td>
<td>open <em>Java Fern (Microsorum pteropus)</em></td>
<td></td>
<td>Red</td>
</tr>
<tr>
<td>James Kelly</td>
<td>February</td>
<td>open <em>Java Fern (Microsorum pteropus)</em></td>
<td></td>
<td>Blue</td>
</tr>
</tbody>
</table>
Then the day after Christmas the weather in my area changed when a low pressure front came through, and that, along with a water change the night before, set them off. I came down that morning and eggs were being laid both on the glass and in the spawning mop. They continued to spawn on and off all day. When they finally stopped I removed the eggs by rolling them off the glass with my finger and picking them from the mop. They were placed in a covered plastic container with a lid. A drop of acriflavine was added to prevent fungus and it was placed on a warm shelf near a heat duct in my fish room. The following day they laid some more eggs. At the time of spawning the temperature was 84°F, the pH was 6 and the DH was 5. The eggs started to hatch on the fifth day and it was another three or four days before the fry were ready to eat microworms and live newly hatched brine shrimp. They spawned again three and a half weeks later laying another hundred or more eggs with half of them hatching. Most of the fry from the first spawning are three quarters of an inch in length and between the two spawnings I have over a hundred fry. They look like they should spawn again soon and hopefully the hatches will be even better as I noted that the hatch was greater from eggs that I rolled onto the sides of the container than the ones that lay on the bottom.

**Algae Guide**

[www.jsctech.co.uk/theplantedtank/algae.htm](http://www.jsctech.co.uk/theplantedtank/algae.htm)

**Rhizoclonium**

**Description:** Strands of fine green or brownish threads which are soft and slimy.

**Cause:** Low CO2 and poor water flow. Low nutrient levels. General lack of maintenance.

**Removal:** Increase CO2 levels and check nutrient dosing. Give the tank a good cleaning. Overdosing excel should also clear it. Amano shrimp will eat it.

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<table>
<thead>
<tr>
<th>Month</th>
<th>Plant</th>
<th>Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>September</td>
<td>open</td>
<td>open</td>
</tr>
<tr>
<td>October</td>
<td>open</td>
<td>open</td>
</tr>
<tr>
<td>November</td>
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<tr>
<td>January</td>
<td>open</td>
<td>open</td>
</tr>
<tr>
<td>February</td>
<td>open</td>
<td>open</td>
</tr>
<tr>
<td>March</td>
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<td>open</td>
</tr>
<tr>
<td>April</td>
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<tr>
<td>May</td>
<td>open</td>
<td>open</td>
</tr>
<tr>
<td>June</td>
<td>none</td>
<td>none</td>
</tr>
</tbody>
</table>

**Fish Categories**

- Loaches, Suckermouth, Catfish, (Corydoras, Brochis, Plecos)
- Cichlids-substrate spawning (Angels, Kribs, Rams, etc.)
- Cyprinids (Goldfish, Koi, Barbs, Danios, Sharks, Rasboras, White Clouds, etc.)
- Characoids (Tetras, Hatchetfish, Silver Dollars, etc.)
- Cichlids—Mouthbrooding (Guentheri, Aulonacara, etc.)
- No jar show due to Christmas Party.
- Guppies, (Fancy, Trinadadian, etc.), Swordtails
- Bettas, Gouramis, Paradise Fish
- Mollies, Platies
- Due to Awards Night.
March 6, 2011: Hamilton & District Aquarium Society AUCTION ONLY

March 20, 2011: (Annual awards meeting in Waterdown at 9am. Location will be announced closer to the date)
10:30 AM CAOAC Executive meeting in Waterdown, ON
12:00 PM CAOAC General meeting in Waterdown, ON

March 27, 2011: Brant Aquarium Society SHOW & AUCTION

April 10, 2011: Durham Regional Aquarium Society SHOW & AUCTION

April 17, 2011: (Annual reports are due)
10:30 AM CAOAC Executive meeting in Waterdown, ON
12:00 PM CAOAC General meeting in Waterdown, ON

May 1, 2011: London Aquaria Society Auction

May 20 - 23, 2011: CAOAC annual convention hosted by the Brant Aquarium Society. Best Western Brant Park Inn, Brantford ON Canada (SHOW & AUCTION)

June 26, 2011: (CAOAC Meeting / Presidents BBQ)
10:30 AM CAOAC Executive meeting in Waterdown, ON
12:00 PM CAOAC General meeting in Waterdown, ON

September 25, 2011: London Aquaria Society Show & Auction

October 2, 2011: Hamilton & District Aquarium Society SHOW & AUCTION

Algae Guide
cont’d from page 14

Spirogyra

Description: Fine strands of green algae sometimes very long in length. Slimy to the touch. Under a microscope the chloroplasts are aligned in a spiral - hence the name.

Cause: Often appears a couple of weeks after a disturbance that causes a spike in ammonia. This can be anything from a disturbance of the substrate to a dead fish gone unnoticed. Likes high light levels and high nutrient levels.

Removal: Once it has appeared it can be very hard to clear as it thrives in the same conditions as plants. Pick out as much as possible and do a three day blackout with CO2 turned off and doing large daily water changes. Dose back with macros after the water change. Afterwards I found normal dosing Excel also helped. Rosy barbs will eat it if made hungry. Also try reducing the lighting.

Another method to try is to try lean dosing at around 1/4 to 1/8 Estimative Index levels for a few weeks. I had good success doing this.
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London Aquaria Society
Aquarium Services New Location, 920 Commissioners Road, as of December 6, 2010