



**FEDERATION OF BRITISH AQUATIC SOCIETIES**

# **BULLETIN**

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**SPRING 2010**



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# **BULLETIN**

## **March 2010**

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*Opinions expressed in any article remain those of the author  
and are not necessarily endorsed by this publication*

**Produced for FBAS website by Dick Mills**



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## EDITORIAL

With the snow and ice behind us (at the time of writing, anyway!) it's now time to look forward to the coming fishkeeping season.

Reaching the public is fundamental in attracting and keeping the interest in the hobby alive and I've spent a couple of weekends doing just that with our friends at Chenies Aquatics. You can read about our exploits elsewhere in this issue.

Having a son in Denmark makes for mandatory travels, but I managed to use the time to good use by installing an aquarium in his house. This also gave me an ideal opportunity to gain experience of the Danish pet scene.

It wasn't only the weather that got 2010 off to a bad start, we were unfortunate to lose two Fishkeeping acquaintances in Ivan Dibble of Bristol Tropical Fish Club and Bob Nelhams from Hounslow & D.A.S. Both played their part in promoting the hobby over many years and we share their loss with all those that knew them and appreciated their friendship.

Don't forget to tell your Fishkeeping friends about this FREE downloadable magazine on the Internet – spread the word and help keep the hobby alive.

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# Out & About:



## WHOLESALE TROPICALS

"Wholesale Tropicals" is, in fact, retail only not what the name suggests, and has been a magnet for fish keepers from all over the country, not just the London area.

For years this establishment has been a premier fishkeepers' paradise and in recent years has undergone a total refurbishment.

Once boasting a 150 tanks full of exotic fish, now has 330 so you may well have to be prepared to spend up to half a day checking at every tank so you don't miss that fish (or fishes!) you would like to add to your collection!

On the day I visited the shop (22/02/10) I was told they were low on stock due to the Chinese New Year that stopped delivery of new shipments. However I found plenty to interest me.



A Fire Eel about 450mm (18") was up for grabs at £100.00 – surely an Open Show fish with the "Wow Factor".

A few tanks along, in great condition, was a *Pseudodoras niger* £55.00 for a 250mm (10") specimen - this catfish being as "Cheap as chips" as they say along Bethnal Green Road.

Also for catfish lovers get a load of this: *Mystus wyckii*, maybe only 75mm (3") but £6.50.

# Wholesale Tropicals

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well be tempted to take home a genuine pair of Emperor Tetras, *Nematobrycon palmeri*, already sparring up, and won't be too long before they are spawning when you get them home. How much? Just £3.00 each.

Two tanks away I spotted *Scleropages jardini*. a 100mm (4") Arowana shape/type of fish native to Northern Australia and New Guinea, almost at a giveaway price of £27.50.

For those who want to go all technical, *Corydoras* CW028, great size, looking much like *Corydoras schwartzi* but with more striking markings £17.50 each. What a shame I didn't have a few bob more!

*Aphyosemion australe* 'Gold' looked really nice in a selection of Killifish species, these being £9.50 a pair.



With all these temptations on offer, not doubt fishkeepers within reasonable reach will be jamming the roads to get there – even if you have to pay the Congestion Charge on the way, you'll 'save' it on the low prices of the fish you buy.

For those that wish to go by car, you can actually scoot around the congestion zone, avoiding these charges, via the Western Avenue, through the underpass at Marylebone Road, on pass Kings Cross Station and up the Pentonville Road etc.

Going by bus you will need a No 8 and get off at the Main Post Office that is opposite

Opening times Mon, Tues, Wed, Fri. 10am - 6pm Thurs 10am - 2pm Sat 9am - 6pm Sun 9am - 1.30 pm.

Don't forget to print off Wholesale Tropicals advert in this Bulletin, show it at the counter and receive 10% discount.



Club visits were very popular at one time but, with fewer Clubs around Terry, told me they don't see many these days. However if you have a sizeable collection of members in your Club, or join up with another Club or two, then phone Terry who will be pleased to see you.

What did I purchase, I can hear you say? I just couldn't turn down a pair of those Emperor Tetras. How do I know they are a sexed pair? Because all who serve you, know their fish, no 'weekend staff' here.

Oh yes, I also brought a pair of *Corydoras haraldschultzi* at £12.50 each, enough to knock your eyeballs out, see you at Hounslow's Open Show, with my fish!

Malcolm. (Hounslow Club Member)

**Wholesale Tropicals, 220 Bethnal Green Road.  
London E2 0AA. Tel: 020 77395356**



# ASK US



## Where do frogs go to when it SNOWS?

Frogs head for shelter such as the garden shed or your greenhouse, even if you have the doors shut they manage to get through the smallest gap.

Frogs like to sleepover winter, however they are selective where they sleep, they don't want to be waken up until the end of winter. How often have I been rummaging around the shed, greenhouse or garage to be surprised when a frog appears? Believe you me they are not a happy frog, would you like to have your duvet removed when you are fast asleep? What have you actually uncovered? Is it a Frog, or is it a Toad?



The Common Frog has smooth skin and grows to gcm (3 1/2") in length. It is green/brown in colour sometimes almost buff. Toads have a dry looking and very warty skin of light brown, but there are exceptions in their colour. Adults grow larger, up to 12cm (5") in length.

Frogs like to hibernate where the temperature remains constant and so will seek out a heavily mud spot at the bottom of your pond where they can still breath through their skin.

To help frogs through the winter's snow, build up areas of rotting leaves or piles of unused logs. Thaw part of your pond throughout the winter months, not only for your fish, but also for the frogs to get enough oxygen.

Frogs in the summer days will eat lots of insects and pests, but best of all they have a healthy appetite for slugs and snails. So look after your frogs, they could be much better than your dog as a man's best friend, well, in the garden that's for sure.

Edited from "Garden Answers" February 2010

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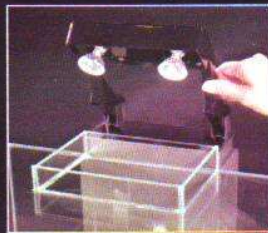
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# UNEXPECTED ALGAE BLOOMS

## by LES HOLLIDAY

A universal problem found at one time or the other with most aquariums, freshwater or marine, is the often quite unexpected algae blooms which can occur despite high levels of care and maintenance and seemingly perfect levels of water quality. In such cases a prime suspect has got to be an accumulation of phosphate which at very low concentrations, that is above 0.5mg/l in freshwater aquariums and above as low as 0.015mg/l in marine systems, can trigger uncontrolled nuisance algae growth. As phosphate concentrations of such low orders so easily encourage strong growths of algae, particularly filamentous green forms, its not surprising that many hobbyists are caught unawares and end up having to treat the result rather than avoiding the cause.



To be fair few hobbyist test kits measure low enough to distinguish phosphate levels below 0.5mg/l and treat readings below this level as nil. This does not allow any indication of rising phosphates in the range below - 0.5mg/l, which would be handy for the freshwater hobbyist allowing remedial action to be taken before a bloom occurs.

Marines hobbyists can also easily be misled into believing that no measurable phosphate is in the water even though levels far greater than are acceptable could be occurring. Some care is required, therefore, in choosing a good quality test kit which measures the required levels and marine hobbyists, especially, may require a specialised kit designed for measuring the ultra low levels required for acceptable salt water parameters.

There are a number of ways phosphates can be added to your tank but the most likely cause is from fish wastes and over zealous feeding.

Correct feeding, even at minimal levels will result in some phosphate accumulation in the aquarium and overfeeding will more than aggravate this. Most non-herbivore foods include quite high levels of phosphate and it is worthwhile choosing brands like the NutrafinMax range which are manufactured using a natural enzymatic process that separates fish meat from bones and scales, which are rich in phosphorus and result in a phosphate level down as low as 0.8%.

Another main source of phosphate is from the top up water added to your tank using the local water supply as high concentrations of phosphate can be found both in municipal and rural supplies. This is because phosphate in the form of soda ash is often added to the main water supply to overcome leaching of poisons into the water from old lead pipes. If this is a problem in your area it might be necessary to use reverse osmosis or de-ionisation to eliminate this potential source of phosphate. Unfortunately reverse osmosis only removes around 90-95% of this pollutant from the water and it is possible, where the phosphate level is very high in the source water, that significant concentrations may remain. Activated carbon can be another potential source of phosphate because the raw material from which it is made is wood or coal, which can have a high phosphate content. Check out the brand of activate carbon you use by adding a few grains to purified freshwater and test using a phosphate test kit. Leave your test for thirty minutes to make allowance for some carbons which release phosphate slowly.

Many forms of phosphate adsorbing filter materials are now available which have become successful and effective solutions against phosphate build up. Phosphate adsorption products are offered based on aluminium oxide or hydroxide or granular oxides and hydroxides of ferric iron. Granular iron based media has the highest capacity for adsorbing phosphate and once phosphate is tightly bound to the surface of the granules it will not be released. Interestingly, the product formed is iron pyrites or 'Fools Gold', as it is popularly known.

Granular iron phosphate removers have a very rapid action especially if used in a phosphate reactor, which avoids the granular material clumping together and maintains a high surface area for adsorption.



A good example of how effective this phosphate adsorbing material can be was recently demonstrated using one of the new Fluval G series external filters. A 200L freshwater aquarium with a high phosphate concentration (2.22 mg/l) was treated with 200 grams of Fluval G Phosphate Remover, which had previously been loaded into the phosphate adsorbing cartridge of a Fluval G3 model external filter. The phosphate level was lowered to safe levels (0.5mg/l) within 5 days and maintained at a safe value for a further two weeks. Continuous use of a phosphate-reducing cartridge is recommended when using a G3 or G6 filters as an effective solution against phosphate build up.

It is suggested that regular testing of the phosphate concentration in the water should take place and when the concentration value starts to rise again, then it is time to replace the cartridge in order to have a continuous protection against phosphate accumulation and hence algae growth.



Generally, granular iron based phosphate removing products are sold as a loose filter material and have an adsorption capacity of around 25g phosphate per Kg. The Hagen range includes 150g containers of Fluval Phosphate Remover from the Fluval Lab Series range, Fluval G filter cartridges, both the G3 cartridge containing 220g the G6 390g for fresh and saltwater use and Green X 4g sachets and 100g mesh bags which trap phosphate, nitrite and nitrate and are only for freshwater use.

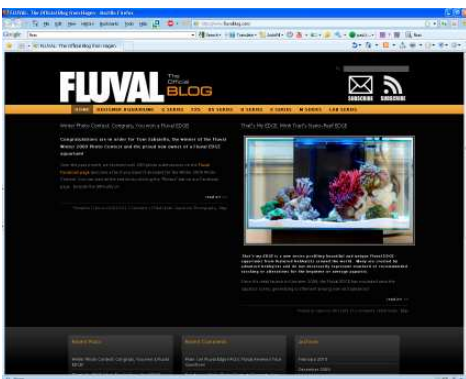
To obtain the best results from phosphate eliminating products it is important to start treatment at an early stage. At the first start up of a new tank it is not unusual for phosphate to be released from substrate material and rockwork. This can lead to nuisance algae blooms whilst the tank is still maturing and at a critical stage in its development. Early attention to testing will indicate if phosphate levels are a problem and allow action to create a zero phosphate level.

The golden rules of granular iron phosphate adsorption use are:

1. Keep the granules in airtight conditions until required for use.
2. Place loose granules in a mesh bag or sandwich between layers of floss if used in an external canister filter.
3. Regularly change granules as soon as the phosphate concentration values starts to rise.
4. For aquariums with chronically high phosphate levels it is worthwhile reducing the phosphate concentration as far as possible with partial water changes before treating with an adsorbent.



For more information on all products from Hagen visit [www.hagen.com](http://www.hagen.com).

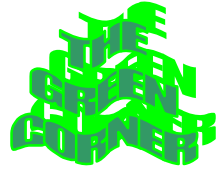


See also

**Fluval Goes Social!**

on page 34

# The area for aquatic plant-lovers



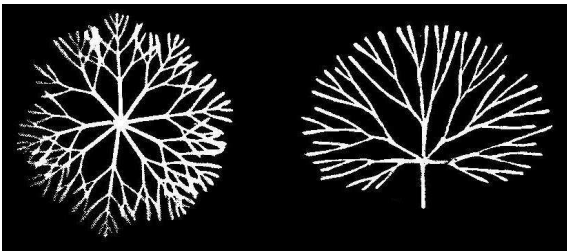
The furnished aquarium shown on the left contains only two species of plants. Whilst this goes to show just what can be achieved aesthetically with a minimum number of plant species, two species featured are often confused with one another – *Ambulia* and *Cabomba*.



In fact, when seen side-by-side, you begin to wonder where the confusion lies! *Ambulia* is the lighter coloured plant and the structure of the 'whorls' is also quite distinctive from one to another.

*Ambulia* has a completely circular pattern, whilst that of *Cabomba* is actually more semicircular.

*Ambulia* is now more likely to be found under the generic name *Limnophila*. Some reports suggest that if its stems are broken they exude a substance toxic to fish. Handle with care!



*Ambulia*

*Cabomba*

## Fishes of the Silent Cs



Mention an interest in Labyrinth Fishes, and everyone assumes you mean Gouramies or at least a Siamese Fighting Fish. Some cocky know-it-all may even venture to think you mean Lungfish, Reedfish or, a little nearer to the fishes in question, the Climbing Perch.

Again, another misconception is that all labyrinth fishes come from South-east Asia or thereabouts. Whilst certainly tropical, the distribution of these fish ranges from Senegal in western Africa through the centre of Africa to the shores of the African Rift Valley Lakes. Their common name in fishkeeping circles is 'Bush Fish' although, with great perception (and no little wit), the American author Bob Goldstein once suggested they might be better called 'Ambush-fish' due to their natural tendencies.

The genus *Ctenopoma* provides another fish name for people to trip over when trying to pronounce it. To get the punning title nonsense over with, the 'C' is silent so that the name is pronounced 't'en-oh-pohma'. For those interested, it means 'combed' and refers to the extensions on the rear of the gill cover. (In this context, you may come across the word 'ctenoid' referring to a particular type of fish scale; again it refers to comb-teeth like edging).



As is usual in the world of fishkeeping, some name changes have occurred (around 1995 by the ichthyologist Norris) which resulted in some species being reclassified into *Microtenopoma* although the logic that all small species went into this new category does not always hold true and the reason for the 'micro-' prefix lies in some other physical attribute rather than just overall size.

Species within the *Ctenopoma/Microtenopoma* genera come in two basic shapes: one is more cylindrical than the other – this shape includes *M.ansorgei*, *M.argentoverter*, *C.multispinis*, *M.nanum* and *C.nigropannosum*. The deeper-bodied species are *C.acutirostre*, *M.congicum*, *M.fasciolatum*, *C.kingsleyae*, *C.ocellatum* and *C.oxyrhynchum*. With some of these latter species, the dorsal, caudal and anal fins are so near to each other that they often appear to be joined, encircling the rear half of the fish with one complete fin. The outer edges of the fins may well be transparent and this helps lose the 'fishy' outline and helps to camouflage the fish in its natural habitat.

Speaking of camouflage, most species are of the 'mottled hue' variety, an extremely practical colouration for hiding amongst aquatic plants waiting ready to pounce on any passing meal. The exception to this rule is *C.ansorgei* whose cylindrical body is covered with alternating vertical stripes of dark brown and orange. Just imagine what a sight this fish presents when showing off to a female!

Here is a brief rundown on a few species:



**Ctenopoma acutirostre**

Common name: Sharp-nosed  
Ctenopoma; Leopard  
Bushfish; Spotted Ctenopoma  
Origin: Zaire (Congo)  
Size: 150



**Microctenopoma fasciolatum**

Common name: Banded Ctenopoma

Origin: Zaire (Congo)

Size: 85mm

**Ctenopoma kingsleyae**

Common name: Tail-spot

Ctenopoma

Origin: Senegal

Size: 200mm

A specimen of this species, owned by Sylvia Parrish of Hounslow & D.A.S., became FBAS Supreme Champion in 1976.



**Ctenopoma oxyrhynchum**

Common name: Mottled Ctenopoma

Origin: Zaire (Congo)

Size: 110mm

**Aquarium requirements**

Whilst many of the Gouramis are looked upon as gentle, graceful fishes (although everyone always overlooks the fierce territorialism of a nest-guarding Dwarf Gourami!), these fish are definitely predatory, as one look at their large, sharp-pointed jaws will indicate. They are therefore not community aquarium suitable!

For fish that like to hide yet have voracious appetites (which fortunately does not include the plants), this presents two distinct obligations on the part of the fishkeeper.

Firstly, the aquarium must be tailored to suit the eventual size of the fish – so do your homework before obtaining the species: probably a 600m tank is the minimum size required even for the smaller species, with anything larger beginning to be a bonus for the fish. In any case, the aquarium must be furnished to provide extensive hideaways, bushy thickets etc for the fish to make use of. With the extensive use of plants, conditions in the aquarium will be subsequently dim so make sure any plants you use are well-equipped to thrive under less than brilliant lighting.

Coming from central Africa (well, we'll take an average location between west and east just to be on the safe side!) water temperature should be maintained on the higher than usual side of things, say, around 27-28°C.

Secondly, a wide varied diet must be available and it should include 'meaty' foods in the main. Whilst it is reported that many will take flake, and other dried, food we all know the risk to tank pollution caused by uneaten foods; live foods may be better than their frozen or freeze-dried versions simply for the reason that they move around a bit and appeal to the fishes' snatch and grab instincts better than food just laying there. Water circulation need not be too vigorous but a little may help keep otherwise inanimate food on the move. In the wild, some species may inhabit faster flowing waters but retreat to slower backwaters when breeding.

## **Breeding**

Breeding appears to be somewhat of a mystery – from the sexing of individual fish right up to how they do it. Not only that, should you be successful then you may not be able to repeat the exercise to order!

There are no apparent external sexual differences between the fish and whilst some have been observed to utilise bubble-nests, sometimes fry 'appear' without any visible preambles occurring. This has led some to wonder whether mouthbrooding is employed. Should you see young fry in the tank, then it would be prudent to remove the adults and leave the fry to a luxury of a large tank in which to grow but appreciate they might have a job finding their initially-required small food in a large space. Leaving a dim light on 24 hours might help out in this respect.

# KNOW YOUR FISH



## **GREEN KISSING GOURAMI – *Helostoma temminckii***

As you will have seen from our front cover, there's something endearing about this fish, with its constant 'puckering up' action.

Although a member of the related Gourami group, this South-East Asian fish is a much larger species than its more decorative cousins, growing to around 200mm.

Many aquarists are often surprised to learn of this colouration for this species, being more familiar with the slightly smaller pink variant found in retail shops. This is the natural form, the pink kisser is aquarium-bred as is a marbled one. However, the fish is mono-specific, ie, this is the only species in the genus.

It is a peaceful species content to browse on vegetable matter and plankton (plastic plants are almost mandatory for its tank's furnishings!). Some floating lettuce leaves can act both as a nesting attraction and also to encourage bacterial life which any subsequent fry can use as a first food.

It will tolerate a wide range of water conditions although, like most fishes, it prefers softer water.

Some fishkeepers might worry about its rasping like mouth doing damage to the flanks of other sizeable fishes in their collection, whilst others see it as a 'test of strength' feature when practised on other Kissing Gouramies.

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# The effects of over-feeding fish on water quality

Dave Hulse,  
Tetra Information Centre

It is not our fish that pollute our pond or aquarium water, it is the food we feed them and the breakdown of that food, both in the fish and in the water that pollutes.

Pond fish show seasonal growth, in the summer, when water temperatures are at their warmest, the metabolic rate of the fish in our ponds is at its highest. The fish have voracious appetites, consume a considerable amount of food, and hopefully convert as much food as possible into body weight. Aquarium fish show no seasonality to their growth.

Tropical aquariums are maintained at a constant temperature, thus the metabolic rate shows little fluctuation. Goldfish in unheated tanks may be exposed to minor fluctuations due to ambient room temperature but growth rate will again be more or less stable. Thus aquarium fish have constant metabolic rates, however, if we want to increase the rate of growth of the fish then we can increase the feed rate.

Whenever we feed our fish, we add more potential pollutants to the water. But with careful pond or aquarium management we can safely raise feed rates to ensure maximal fish growth without compromising water quality.



Before we look at the effects of overfeeding our fish on the water quality, we should first understand the composition of fish foods, their fate in the system and how they give rise to pollution in the water.

Food manufacturers carefully formulate all of their diets to meet the nutritional requirements of the target fish whilst ensuring minimal water pollution.

The principle problem pollutant that all fishkeepers are familiar with is of course ammonia, released from the breakdown of the amino acids that make up the proteins in the fish food.

So fish food is ultimately the source of ammonia in the pond or aquarium; as a fish digests its food it breaks proteins down into their component amino acids. For every 100 g of protein in fish food on average 40 % of the amino acids will be used to make other proteins in the fish, (i.e. used for growth, tissue repair or renewing important metabolic molecules). A further 5 % will be uneaten (quite unbelievable considering the appetites of some fish!!!), 20 % of the protein remains undigested and thus passes out in the faeces to degrade in the water. The remaining 35 % will be used for energy. So for every 100 g of protein eaten, 60 % of it will result in the formation of ammonia

Reputable fish feed manufacturers research strategies to reduce this proportion and one way this can be done is to offer the fish an alternative source of energy in their diet – oil. By increasing the ratio of oil to protein in a fish food, less protein is used for energy production, thereby producing less ammonia. The other advantage of offering more oil to the fish to use as an energy source is that this frees up a greater proportion of protein to be used in growth, repair and other non-ammonia generating functions.

So fish food leads to the release of ammonia from the fish, but also causes the fish to release faeces.

## **Solid Waste**

There are many problems with solid waste in any fish-keeping system. It clouds the water making it look unpleasant. Suspended solid waste clogs the fish's gills hampering respiration and encouraging bacterial or fungal gill diseases. The breakdown of the solid waste demands oxygen, thereby potentially depriving the fish or delicate filter bacteria. As we can see from the figures above, fish food will contain undigested protein that will breakdown in the water releasing ammonia. Suspending solids can accumulate in the filtration system, clogging the biofilter. This leads to colonisation of the biofilter bed by heterotrophic bacteria that out-compete with the delicate ammonia and nitrite oxidising nitrifiers, causing reduced filter performance.



Also accumulated layers of solid waste, either at the pond or tank bottom or in the filter encourages populations of pathogens such as bacteria fungi and many parasites. For these reasons, solid waste is very undesirable in any fish keeping system, and it is essential that we have efficient effective mechanical filtration, that is regularly maintained, to trap and dispose of this troublesome fish waste.

So we have seen that feeding our fish (obviously an essential and enjoyable task!), is the source of the ammonia and solid waste that causes all the headaches for fish keepers and is the reason we have to fork out a small fortune on filtration systems!

### **Increasing feed rates - what should happen.....**

There are several reasons we may increase the feed rate for our fish. In ponds during Spring we switch to a food that has a higher protein level in it. We may be growing-on fish ready for sale, Shows or simply because we want larger fish.

The desirable outcome of an increase in feed rates of fish is of course growth! The fish effectively assimilate the increased levels of protein in their diet converting it into body weight. An increase in feeding rates would lead to a corresponding increase in the sizes of the fish. There are many innate and exogenous factors that will govern the fish's growth rate, but without food, growth cannot occur.

### **Increasing feed rates – what may happen and how to avoid it!**

There are a few other possible outcomes that can result if an increase in the feeding rate of our fish is not managed properly.

As we can easily see, an increase in feeding rate will result in an increase in ammonia production. In a healthy, well aerated, clean pond or aquarium, the biofilter bacteria population should soon multiply to deal with this increased load, and after a brief lag, where ammonia will accumulate in the water, levels should soon drop to become undetectable with simple water test kits.





The filter bacteria population has thus multiplied and can now cope with the increased load. The fish keeper should allow roughly a week for the lag period. In this time following an increase in feed rate, use a good test kit to check ammonia and nitrite levels and water change if the levels become toxic as indicated by the test kit.

If filter bacteria population growth is inhibited, perhaps by insufficient oxygen in the biofilter or excessive amounts of accumulated solid waste, then this lag phase will be sustained and the toxic effects of ammonia, (and consequently nitrite), will begin to harm the fish. Fish poisoned by ammonia or nitrite will not be able to convert the increase in feed rate to an increase in growth rate.

Thus an increase in feed rate must be accompanied by careful management and monitoring of the biofilter to allow filter bacteria population growth.

Not only will the level of waste ammonia rise following an increase in feeding rate, the level of carbon dioxide (a waste respiratory gas released at the gills). Carbon dioxide dissolves in the water as an acidic compound (carbonic acid). Thus following an elevation in feed rates, there is a potential decrease in pH. If water is poorly buffered (for example in softwater tanks or ponds in softwater areas of the country, where carbonate hardness is very low), then this pH decrease may have adverse effects on the fish. Thus the fish keeper should prudently test pH and KH levels following a feeding raise in addition to ammonia and nitrite levels.

The last problem and possibly most important in the long-term, caused by increasing the feed rates is triggered by the rise in production of the fish's faeces.

Obviously an increase in feed rates will lead to an increase in defecation. We have seen above that faeces may contain up to 20% of the dietary protein. (The exact amount depends on the type of proteins in the diet. Cheap fish foods may contain a high proportion of poorly processed plant proteins. These are low-cost but are only around 60% digestible to the fish. Compare higher quality – but more costly, fishmeal which is over 90% digestible).

An increase in solid waste will have several effects on the system. As mentioned at the beginning there are knock on effects of aesthetics, gill clogging, encouraging pathogens, discouraging filter bacterial proliferation. However the effects of this solid waste on water quality are also very important. More fish faeces in the water will raise the biochemical oxygen demand (BOD), as it needs oxygen to degrade. There should be a plentiful oxygen supply in a well-aerated pond or tank and this increased demand may have limited noticeable effects. However, if water is already low in oxygen, then the decay of this increased amount of fish faeces may deprive the fish of oxygen, leading ultimately to the fish being unable to increase its growth rate in response to the increased feed rate. Also the increased oxygen demand will deprive the filter bacteria of oxygen, thereby leading to an accumulation of ammonia and nitrite in the water – two pollutants that hinder the fish's ability to uptake oxygen.

Thus when increasing the feed rate, be prepared for more fish pool! Mechanical filtration will need regular maintenance to remove the trapped solid waste. So flushing of vortices, backflushing pressure filters, cleaning sponges / brushes etc – whatever type of mechanical filters you have, regular cleaning is vital to remove this nasty trapped solid waste.

### **Increase frequency rather than portion size**

Lastly a word about how to increase feed rates. This article has predicted the potential outcomes of an increase in the feeding rate and hopefully armed you with the knowledge to prevent any of these causing problems. During the warmer months we switch to higher protein foods for our pond fish, so all of the above becomes very relevant. However, a Koi keeper may wish to increase the growth rate of their fish, perhaps in preparation for next year's Sow season or a Society visit. Whatever the reason, rather than simply increasing amount of food fed at each 'meal', it is often preferable to increase the frequency of the 'meals.'

Many fish are evolutionarily adapted for 'browsing' – in the wild they always search for food and there is a constant trickle of food items down to their gut. Goldfish, carp and many other important ornamental fish lack a stomach to act as a food reservoir, so when they are fed large sporadic meals, a greater proportion of the food will pass out undigested. Feeding most omnivorous ornamental fish little and often results in much more efficient utilisation of the food and significantly less waste production.



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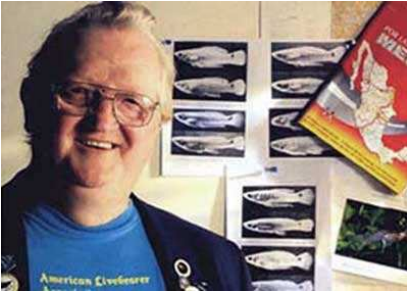
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# IN MEMORIAM



## Ivan Dibble, Bristol Tropical Fish Club

Bristol's loss is not confined to the Society alone for, with Ivan's passing, fishkeeping itself has lost a great ambassador known to thousands of aquarists around the world.

Although his livebearer knowledge was encyclopaedic (and often a little too intense for some), Ivan never lost his willingness to help out whether it was giving out practical information, writing highly informative and entertaining articles or sharing livestock. He also offered free use of any of his photographs to the Federation for use in any of its publications or on the website.

For many people Ivan was famous for giving *Characodon audax* its inspirational name - the 'Black Prince' – how could you possibly call it anything else?

Internationally, Ivan made his mark with his dedicated support for Fish Ark Mexico, the restoration/rehabilitation project for Mexican livebearers which was founded a couple of years after Ivan learnt of the fishes' plight in 1995. Usually, conservationists bring out fish to conserve stocks, but Ivan took this a stage further and actually re-introduced captive-bred species back to their previous native waters.

On a different level, Ivan was a caring man and there must be hundreds of fishkeepers around who regularly received e-mailed greeting cards from him throughout the year.

I suppose a most apt epitaph would be to paraphrase Douglas Adams' famous final line from the Hitch-hikers Guide to the Galaxy and say 'Cheerio Ivan, and thanks for all the fish.'



## **Bob Nelhams, Hounslow & D.A.S.**

A worker par excellence and meticulous in planning – especially when it came to lunches at Open Shows where he was King of the Rota!

He really enjoyed the social scene and was the driving force – and usually first on the dance floor with Tess - at all the Societies' Dinner and Dances.

At our various outdoor events he was 'Kettle Chief' and kept the tea and coffee coming all evening. He only asked for one reward – a few slices of the Society's famous Bread Pudding – even though we all knew he shouldn't have it due to his diabetes!

As Hounslow's longstanding Secretary, his Minute-keeping was precise and in 1990, he took it upon himself to produce a History of the Society – the first 41 years. One notable extract for October 1987 reads – "Bob Nelhams takes over entertainment at very short notice – the Social Secretary had problems with the hurricane."

We missed him dreadfully when he moved North but appreciated the fact that it was certainly best for him, and probably less worry, to some extent, for his daughter Val.

His interest in Fishkeeping was such that, whilst he could no longer physically maintain an aquarium, he offered to act as a test bed viewer of any new videos that the Federation of British Aquatic Societies made, before they were generally released. Sadly, he was never to take up this job for us.

We, at Hounslow Aquarists Society remember Bob as a great friend and a Club Member who gave years of service to the Society.

We cannot forget him for one particular reason: thanks to over-generous donations to his Farewell Supper, the surplus funds were put to excellent use. Every time we have a Slide Show, the 'Bob Nelhams Memorial Screen' is used, so we have a constant reminder of our dear friend.

Dick Mills, President FBAS



## LOOK OUT! THERE'S A HERON ABOUT!

When a Heron visits your garden they are unmistakable, being the UK's largest native bird; grey and white with a huge wingspan, a long neck and a powerful beak. When in flight it has the look of a bird from prehistoric times.

Heron has a knack for locating your garden pond and if you have brightly-coloured fish it makes their feeding site all the more easier to spot.

There are several methods you can try to protect your fish but the one that almost certainly won't work (despite mass belief) is the widely-available life-size plastic Heron. Herons in nature often feed close together, so they even be attracted by such a static replica.

Plenty of aquatic plants (both floating and submerged) will give the fish places to hide. If your pond has the space, add a 120mm diameter, 300mm long plastic pipe on the bottom for your fish. This makes it very difficult for Herons to see the fish, let alone catch them. Bill Rundle, from Plymouth, reckons Duckweed does a good job of hiding fish from herons too, as does green water.

A trip-wire around the pond will prevent the heron, once landed, from walking into the pond. Thick planting close to and in the pond's edges will also make access difficult. A bonus from this is that it also attracts all forms of wildlife, from insects, birds and amphibians.



Netting is the other obvious solution for protecting your fish and this well-established method is inexpensive and easy to rig up.

The mesh size should be no larger than 25mm (1 in) and the net must be pulled taut over the whole area of the pond so a heron can't land on it.

Keeping the netting tight will also help other birds' beaks and feet from getting trapped, with tragic results.



Heron like to sunbathe, standing tall with their wings outstretched to allow the sun to warm more of their body. This helps herons to preen their feathers more effectively; herons have powdery down on both sides of their chests. Head and neck feathers are rubbed in this powder, which helps absorb any fish slime.

Young herons are called 'Branchers' and don't fly until they are three months old. The beaks of adults are yellow but turn to bright pink during the breeding season, from February to September.

We know they eat fish, but they will also take frogs, water voles, plants and insects. The average life span is five years.

Visiting a heronry is fascinating, one of the biggest heron colonies in the UK is in Verulamium Park, St Albans, Hertfordshire. They are having a 'Heron Watch' period from 19<sup>th</sup> February to 25<sup>th</sup> April 2010.

Many people have never seen a heron – there are fewer than 15,000 pairs in the UK, so to have one in your garden is actually quite an honour.

## My Dream Fish



Share your ideal dream fish  
or aquarium set-up with us

### **Gloria Goss tells us her dream fish for husband Malcolm:**

Malcolm told me how he always wanted a pair of Jack Dempseys after he had seen them in a fish shop in West Ealing. Unfortunately like so many of this type of small back-street shops they have all but gone.

Soon after we got married, and lived in an upstairs flat in Fulham, we had a spare room that Malcolm painted all back (I still don't know why to this day!). Then the tanks were all iron-framed tanks and yes, they were painted black too.

In those days Malcolm made extra money working on cars in the street, so his face was so black I often did not know he was home, as I couldn't always see him in the fishroom!





Seriously, we brought two Jack Dempseys - the male about 6" long and the female much smaller about 4".

The aquarium we kept them in was 4ft long and we did not put gravel on the bottom as they would have moved it up to the front glass so you could not see them. Soon they breed and we had lots of youngsters.

On the third time they bred, we had booked to go on holiday and the young ones were free-swimming. When we returned the female was dead, and so were all the young. We felt because we had no one to feed them that the female could have started eating the young and the male turned on her.

Since moving out of London to Amersham, now that Malcolm has a real fish house (with plenty of natural daylight, and no black paint anywhere) we have often kept this splendid fish, but alas we do not have a Jack Dempsey at this time, so it is my dream that Malcolm would keep them again.



**EARLY WARNING ALERT!!!**  
**Remember**  
**Saturday March 6th**  
**it's the**  
**FBAS Assembly Meeting**  
**The Coach & Horses,**  
**Brentford, Middlesex**

# Fluval Goes Social!

Aquatic specialists Hagen have recently launched several new online initiatives for their market leading Fluval brand, including a presence on social networking sites such as Facebook and Twitter.

There's a new dedicated Fluval website, [www.fluvalblog.com](http://www.fluvalblog.com) where fish keepers can get updates on Fluval products, view FAQs (such as the Fluval Edge FAQ page), share opinions or tips and view product related videos including tutorial setup videos on Fluval 05 and FX5 filters. Visitors can subscribe for updates via e-mail or RSS feeds.



The dedicated Fluval G site, [www.fluval-g.com](http://www.fluval-g.com) has recently been updated with the third product video for this exciting product launch and more detailed information on the most advanced external filter in the world.



Fluval has its own Facebook (<http://www.facebook.com/fluval>) and Twitter (<http://twitter.com/fluvalblog>) pages where visitors can keep up to date on latest developments, share news with their friends and receive information direct to their social networking page.



There's even a dedicated YouTube channel for Fluval, [www.youtube.com/fluvalblog](http://www.youtube.com/fluvalblog) which features all Fluval videos in one easy to access location.

According to Hagen, these online initiatives will soon become invaluable tools for fishkeepers to share information, provide feedback on Hagen's products and get their product related questions answered directly and quickly.

Visitors can also enter exclusive competitions, such as the recent photo competition which ran on Fluval's Facebook page with a Fluval EDGE aquarium going to the winner.

All this is further proof of Hagen's dedication to staying at the forefront of aquatic innovation and pushing the boundaries of new media.

Hagen have always positioned themselves as innovators, not followers and if these recent forays into the social networking world are anything to go by they are determined to keep it that way!

**You can find direct links to Hagen products  
and Information Sheets on the  
**FREEBIES** page on the FBAS website**



## Location, Location, Location: Zambezi

It was no use me trying to jump as my small boat was going increasingly faster, faster and faster by the second, the noise of falling water was horrendous, all I could see was a mist of water spraying hundreds of feet into the air. I just knew this was the end and my life started to flash in front of me. I shouted "I am going, I am going!" I could not see in front of me any more. I just hung on! My boat took a vertical drop ....

"Malcolm! Malcolm! Do you want your tea now?" What a relief it was to have Gloria standing over me trying to wake me up, and not me going headlong over Victoria Falls on the River Zambezi.

The Zambezi is located between central and the south of Africa, with Zambia to the North and Zimbabwe in the South. The Zambezi is truly one of the great rivers of the world. The Zambezi has been divided into four parts to help identify areas within such a long river.

These are known as the Upper Zambezi, Lake Kariba, Middle Zambezi and Lower Zambezi. This great river starts in central Africa and flows horizontally into the sea at Chinde in Mozambique.

The presence of physical barriers to fish movements, such as Victoria Falls, Kariba Dam and Cahora Bassa Dam within the Zambezi River has resulted in partially different fish faunas above and below each barrier. The Zambezi above Victoria Falls contains some 84 species, whereas below the falls the total is approximately 70 species with only 46 species common to both systems. At one point in time before the building of the dams the fish faunas may have been uniform throughout the river system.

Many of the smaller fish seen in our aquariums are to be found in the smaller rivers from both North and South of the Zambezi whilst the Zambezi itself stocks much larger fish such as the Electric Catfish *Malapterurus electricus*, Leopard Squeaker *Synodontis nigromaculatus* and many species of Barbs and *Clarias* catfish. Most of these fish undergo seasonal movements during the rainy season mainly in breeding migrations; the term "potamodromesis" describes these migrations of freshwater fishes.

Some years ago I heard Dr. P. H. Greenwood describe the scene "As I stood in the water the presence of the *Clarias* Catfish swimming up stream was so forceful, swimming in their hundreds I could hardly stand up".

The factors that trigger off these movements are not clearly understood, but probably involve two main criteria, the water quality and increased velocity, plus rainwater on previously dry ground picks up substance called "petrichor" which upon entering the river is detected by the fish and initiates an upstream migration.

When navigating the Zambezi malaria is still a hazard, so the uses of mosquito nets are a must, plus the usual injections before you leave your homeland. Crocodiles and Hippos must be treated with respect, and remember it is often the invisible beast which causes the most trouble. The dorsal, anal and pectoral spines of many fish are carrying toxic mucus, but are unlikely to prove fatal; however the spines of *Clarias*, *Schilbe* and *Synodontis* can still inflict a most painful wound.

Here above the Victoria Falls the only small fish to be found are those at the inlets to the Zambezi from other river systems and that is were much plant life can be found as the Zambezi is too fast flowing and deep to sustain any growth.

The Mottled eel *Anguilla nebulosa labiata* can be found in the Upper Zambezi as well in Lake Kariba and the Lower Zambezi, a male of the species being about 8kg whilst a female has been recorded at 20.5 kg. Parrotfish species are suited to this part of the river with its rocky bottom and fast flowing water, the species *Hippopotamyrus pictus* easily identified by a vertical black band stretching from the dorsal to the anal fins over a light brown back ground.



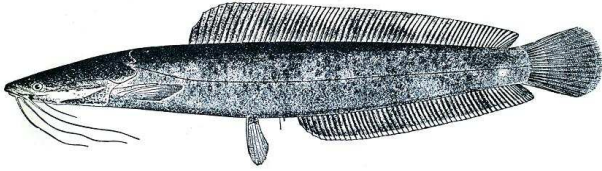
Here, as for most of the Zambezi, the river is patrolled by the Fish Eagle perching on high branches that overhang the rivers banks when not in flight. They only take the largest species of fish, like the Bottlenose *Mormyrus kannume* being up to 2kg and the Characin *Hydrocinus vittatus*, know as the Tiger Fish, itself a 9 kg predator of

fishes up to 40% of its size and a taker of *Synodontis* catfish, but is sought after by the Fish Eagle, plus local anglers as a sport

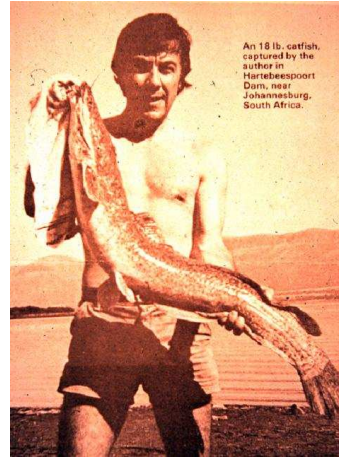
Found in the Upper Zambezi only is the African Pike *Hepsetus odoe* whose habitat is close to the riverbanks looking for those smaller fish such as *Kneria auriculata*, *Alestes* species all who like fast flowing river outlets. One also finds *Ctenopoma multispinis* the famous Climbing Perch, that never climbed, but was so named after it was discovered caught in a tree after the rains had subsided.

After travelling 960 miles of the Upper Zambezi you reach Victoria Falls discovered as we all know by Dr. Livingston, these Falls being one of the true wonders of the world. It is said with the wind in the right direction you can hear the Falls up to 10 miles away. The Falls flow into Lake Kariba, a huge man-made lake acting a reservoir holding back waters before they descend down the Kariba Dam.

The lake bed is essentially sand or rocky, providing little aquatic cover for small fish species or the juveniles of the larger species. Reed beds are found in some areas close to the banks where other plants could not survive. *Tilapia* and *Sarotherodon* species are plentiful and are predatory to species of *Clarias* and *Heterobranchus*, *Claris gariepinus* and can be found throughout Africa.



This catfish is capable of eating everything that moves, provided it is small enough, and most things that are not. Snakes, frogs, small crocodiles, many species of fish, snails, shrimps, aquatic larvae and insects. Fruit berries that are also eaten by the upside down catfish species, *Synodontis*.



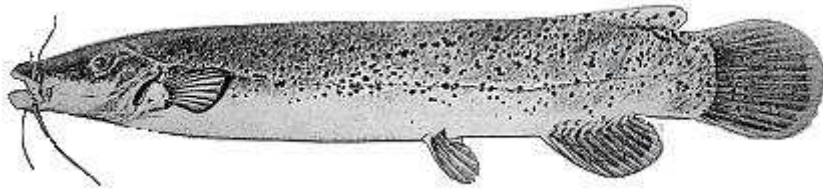
When Dick Mills and Bob Esson travelled up the Nile, they found on its shores a skeleton of a large catfish, Dick photographed it and when returned home it was identified as *Heterobranchus sp.*

Many of the largest species of fish like *Distichodus lusosso* swim in these open waters and once again fall prey to the Fish Eagle. Conditions below the Kariba Dam in the area know as the Middle Zambezi are similar to those below Victoria Falls however many of the Cichlids found in the Upper Zambezi are also found in the Lower Zambezi and more interesting to us as aquarist.

Many of the African river systems that flow south from central Africa run into both Upper and Lower Zambezi and as the continent has warmed up over the last century many species of fish have ventured south. "What do I hear you say? Evidence of global warming?" well we won't go there.



Once again the substrate is of both rocks and sand that turn into banks of mud at its waters edge. Here large holes appear in the banks made by the Giant Kingfishers.



These holes are similar to those used by the Electric Catfish, *Malapterurus electricus*, a catfish with small eyes having very poor vision. It preys on small fish by giving out a small charge mainly at night while fish are resting, this small tingle, make the fish move, now this catfish knows fish are present and then is capable of sending out up to 400 volts over a second or two and killing all the fish within its range. It will then scour the bottom and gobble up the now dead fish.

In brief, the Electric Catfish has a series of electric cells similar to a car battery and set in jelly over the length of its body. Sadly, this lonely fish, only meeting other species just for mating, when the dry season comes, will hibernate in these muddy holes and will live for months as long as they stay moist.

As well as many species of Catfish, there are Eels, Parrotfish, Barbs, Characins, Labeos, *Distichodus*, Freshwater Goby, Bass, Trout, *Barilius*, Killifish and Cichlids.

In the shallow areas near the banks can be found Water Lilies like *Nymphaea cilianthus* a star shaped flower with variations in colour of pink, purple or light blue. A mixture of reeds and submerged plants give plenty of shelter to small fish like, *Barbus viviparus*, size of up to 6.4 cm.



A very rare fish in our shops is *Barilius*, and in the Lower Zambezi live *Barilius zambezensis* basically silver in body colour, with 7 -16 black vertical bars, and grows to 12 cm. It likes sheltered, quiet water with aquatic weed cover. Food consists of aquatic larvae and insects, shrimps, small crustacean and it is not above taking fish eggs and fry. However this species does well in our aquaria, feeding on commercial fish foods.

There are many species of Labeos found in all areas of the Zambezi and most are both too large, or not colourful enough, for the aquarium trade. The Spotted Killifish *Nothobranchius orthonotus* is to be found close by in temporary pools and swampy areas that have flooded in the rainy season. There are many species of fish within the Zambezi that would fill a book to record, however there are fantastic sights, who could forget Victoria Falls, plus an encounter with the odd shark *Carcharhinus leucus*, the largest seen in the lower Zambezi being about 1 metre, however it will grow to 3 metres and is mostly found out at sea.

Malcolm Goss

*Reference:* Aquarium Plants -De Wit

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*Illustrations:* H M. Jubb, M. L. Goss, BBC TV

## **Attention Show Secretaries & Exhibitors!**

**OPEN SHOW** dates are published on the FBAS website but **FBAS Championship Trophies** allocated will only be shown after **FBAS 2010 Affiliation** has been confirmed, and the **Society's Trophy Application** received and processed by the **Trophy Officer**, according to the **FBAS Trophy Rules**.

# FOUR PLANTS AND A TANK

Those who wish to set up an aquarium in Denmark may well have to travel greater distances than we do in the UK. We found this out when we decided to help our son install a tank whilst we were visiting him a few weeks ago. The nearest shop was in Vamdrup about 30km and, with clear Danish roads, about half an hour away.

Agroland is a huge pet store selling Reptiles, Rabbits, Birds, Dogs, Cats and Horse Riding equipment.



Aquariums and their associated equipment, Filters etc is mainly supplied by Hagen with, not unsurprisingly, aquatic plants coming from Tropica, an almost local, Denmark-based aquatic grower and supplier.

However, despite this large choice we decided not to 'pick 'n mix' and purchased a 'Start Up' aquarium produced by Diversa, made in Poland. The bow-fronted tank measured 60cm by 30cm and was 35cm deep.



With the set-up came internal filter, heater, thermometer, fish net and background. A suitable piece of rock we found later in the garden but we did purchase gravel and plants, with the fish coming a few days later.

Here's a quick story-board version of how the tank was set up.



Gravel washed and placed in the tank (background previously attached)



With 'hardware' in position it's time to fill the tank – the saucer placed on the substrate prevents the incoming water from disturbing the gravel.



This completed tank is a bit of a cheat, as we took the photo some time later!

You can just see the shoal of Neon Tetras at the left hand end of the aquarium.



*Hemianthus micranthemoides*



*Echinodorus quadricostatus*



*Echinodorus* sp 'Red Diamond'



*Cryptocoryne* sp

Malcolm Goss

# **A CENTURY of FISHKEEPING by Dr David Ford FBAS**

*Now over 70 years old, the Federation has been around for most of the last century. Just how much has our hobby changed in all that time?*

## **Part 1**

*Here's my personal view....*

### **Aquariology**

Of course, keeping fish in captivity started thousands of years ago, but it was our very own London Zoo that was the first in the world to build a public aquarium.

That was over 100 years ago (1853 actually) but the concept of using glazed iron frames as aquaria was first seen in Britain's 'Great Exhibition' of 1851. This revelation (the iron tanks were originally designed to house exotic plants on long sea voyages from the far flung parts of the British Empire).



The Victorians obtained these tanks for keeping petfish in the home even for tropical fish species by having a metal plate base under which a candle would keep the water heated.

By 1900 there was even a Royal Aquarium. This was built in 1876 opposite the Houses of Parliament but no fish were installed before it was demolished in 1902 to build the current Westminster Central Hall. Across the river Thames there is now the London Aquarium in County Hall one of the largest public aquariums in Europe.

Back in the 1900s the Germans noted the Victorian innovations and they adopted the iron-frame aquarium with Hamburg becoming an important centre for the importation of exotic fish via their sea trade. Berlin Zoo (opened in 1844) built a public aquarium in 1913 (and still active today).

The greatest breakthrough came in the early 1980s when it was found that Silicone Sealer could replace putty for glazed frame tanks. The building trade compounds are toxic to fish but manufacturers soon offered a safe aquarium quality. It was then found that the Sealer could glue the sheet glass together, dispensing with the need for an iron frame. This made the standard home aquarium much lighter and the traditional 24x12x12 inch tank became the more popular 36x15x12 inch (the empty weight of which a man could comfortably carry and home furniture could support).

Even glass is heavy and the public aquaria of the world developed the plastic tank for their giant aquaria. Acrylic was the ideal material because of its clarity and strength.



Hundreds of new public aquaria opened in the last quarter century in every developed country of the world using acrylic sheet and Silicone Sealer to display their fish in many novel ways, with walk-through (even moving walkways) aquariums.



This idea was adopted by the hobbyist and plastic aquaria became common in the 90s, from Goldfish Bowls to Tubular Tanks for a living display in the 'Ideal Home'.

## Tropicals



This is my current tropical aquarium in my home, but my first tropical aquarium was in the 50s when a glazed metal framed aquarium with a slate bottom could be bought. This allowed a tiny oil lamp to be installed under that slate to maintain the water at a tropical temperature.

The system worked quite well providing the oil lamp was properly maintained and I successfully bred Guppies with this method.

Early in the 1900s Direct Current electricity was installed in the homes of wealthy Edwardians. But not until the 1950s was the change from DC to AC current completed for British homes and the technology was then available to use thermal strips for controlled heating.



With DC, these gadgets would burn out, but AC meant a clean break for an 'on and off' and so the bimetal strip in a glass tube heater-thermostat was born.

With that heating system there was a boom in tropical fishkeeping and imported wild fish from South America arrived via the new airfreight trades. Special aquatic shops, rather than just pet shops, started to open importing these exotic fish and the equipment needed to keep them alive. But even AC operated thermostats sometimes burnt out or stuck permanently 'on' killing valuable (and then expensive) pet fish.

It was also in the 60s that the microchip was developed (actually 1958 for the first one) and so the technology was available to replace the bimetal strip with a more reliable heating control for the tropical system.



The manufacturers' research people took another 20 years though to exploit this potential. I developed one such heaterstat in the 80s, within the 'Atlantis' range, called 'Capricorn' which was a heating coil buried in a plastic plate controlled by a microchip pre-programmed to heat only to 26 degrees C. Never launched beyond a test market in England, so if you have one, it will become a collectors' item.

Another 20 years on and

digital heaterstats, such as the Rena SmartHeat (with resin replacing glass) are available. The original bimetal strip heaterstats are still sold because they are cheaper and reliability has improved with new materials.



But the future is digital!

## Lighting

The Victorian aquaria must have been lit by candle light (over the top rather than underneath!) or oil lamps. Canada's Woodward and Evans patented an incandescent light bulb back in 1875, but it was Thomas Edison of the USA who developed the idea a few years later and then the world was lit up by electricity.

The filament bulb was the natural choice for aquarists to place over their tanks in the 50s and 60s. Very successful they were too because the energy level of the photons the incandescent bulb emits is ideal for photosynthesis. Hence aquarists could become water-gardeners too.





The furnished aquarium had arrived, with themes such as an Amazonian scene with forests of *Vallisneria* under blankets of *Azolla*.

The tradition was to use one, two or more bulbs fitted sideways inside a metal or wooden box 'hood' of 25, 40 or even 100 watts.

The socket was protected from condensation and splashes by adding a short piece of bicycle inner tube to cover the fitting, we all did it.

The problem was that these bulbs generated a lot of heat and the 'sagging' filament had a short life. So those R&D (research and development) teams soon offered the trade the 'new' fluorescent tubes. Not all that new actually, the fluorescent tube was invented by Edmund Gurmer back in 1926 but USA's General Electric developed the lighting in 1938.

Initially the typical warm-white tubes from office lighting were sold but aquarists soon found that the photon energy was not right for aquatic plants. They needed the (to our eyes) blue light (wavelength 400 to 450nms) that penetrates water as well as the yellowish light (500nms) of the overhead tropical sun.



Fluorescents with specific wavelengths were marketed by the late 80s and early 90s with names such as Triton, Beauty Light, Coralife, Aqua Glo, Aquastar etc.

The tubes also became thinner and so easier to fit; this was based on the number of 1/8ths of an inch diameter, i.e. T5 (5/8") is thinner than a T8 (1") and also has a longer life.

The traditional fluorescent light can halve its output (Lumens) in just 6 months. We may not notice, but the plants do.



The phosphor used within the glass tube is now chemically fixed in place to prevent migration (the cause of fading) and lifespan of 5000 hours are guaranteed with consistent Lumens output.

Now it is 2010 and yet another change is on the way to become 'green' energy saving Halogens with low voltages are being fitted to aquarium hoods. But the future is LEDs, already being sold as clip-over units.

## Next Time - How Fishkeepers Changed!

**DON'T FORGET, THERE IS A WEBSITE,**



**OPERATED BY  
Dr DAVID FORD,**

**ESPECIALLY DEDICATED TO  
THE FESTIVAL OF FISHKEEPING**

[www.festivaloffishkeeping.co.uk](http://www.festivaloffishkeeping.co.uk)



# **Out & About: (REVISITED)**

# **Chenies Aquatics**



**Photos by Peter Anderson &  
Graham Robb**

I know what you're thinking – that you've already read an Out & About' article in this issue and that the dozy Editor has repeated an article from last time! Well, we at 'The Bulletin' pride ourselves in any follow up service and, in fact, Chenies Aquatics put a very interesting idea up for us to think about.

Following on from the last issue's visit (see, you were right in one sense), owner Graham Robb invited myself, Peter Anderson and Dick Mills (all of Hounslow & D.A.S. - and the FBAS Council incidentally!) to set up some decorative tanks and to talk to the visiting customers about them, together with promoting aquatic Societies and the FBAS.



Setting up decorative tanks in a retail shop may seem like a counter-productive step (just try catching fish for customers in a heavily planted tank!) but we found out that the tanks seemed to make the fish even more attractive – much to the annoyance of the otherwise delighted sales staff.

Several of the tanks featured a minimum number of plant species – the *Cryptocoryne* only and *Cabomba/Ambulia* set-ups were especially popular. A rather gaudily-decorated brackish water tank – Diver’s helmet, plastic plants and all – was easily explained away as the partially salt water would not be suitable for live aquatic plants. The Spotted Scats and Archerfish were talking points too.

These weekends were part of Graham Robb’s ideas to celebrate 30 years of Chenies Aquatics and he has planned other ‘events’ throughout the coming year. Watch this space!

So if you are looking for a nice fish or advice on how to build a Koi pond, a visit to Chenies Aquatics could be worthwhile.  
Further information at [www.cheniesaquatics.co.uk](http://www.cheniesaquatics.co.uk) .



**Note:** You can experience a ‘fishing trip’ with Graham and Peter Anderson as they collect fish from Holland by viewing the FBAS Video ‘Bringing in the Fish’ available for free Society hire from Peter Anderson or individual purchase from Keith Doswell.

See details of all FBAS Videos at [www.fbas.co.uk](http://www.fbas.co.uk)

**PLEASE SEND US REPORTS ON YOUR FAVOURITE SHOPS**



## 2010 TETRA FURNISHED AQUARIUM COMPETITION

The 2010 Festival of Fishkeeping will see a significant upgrade as far as the Furnished Aquarium Competition is concerned. You may have noticed that the word 'Society' was omitted from the title. That's because the Competition has been expanded and will now comprise of two sections – one for Societies as before, and a new one, for individual residents at the Festival.



For the **Society Furnished Aquarium Competition**, the judging rules are exactly the same, visitors will be given a ticket and asked to choose "Which aquarium set-up would you like in your home?"

Each day the set-up with the highest number of tickets will be the winner of that day, the highest number over the two days will be

overall winner and the Society will be presented with the **Wally Ryder Perpetual Memorial Trophy**, for one year, together with

**FREE 2011 FBAS AFFILIATION and a Tetra 60L Aquarium Kit.**

The Runner-up Society will also receive a **Tetra 60L Aquarium Kit.**

This Competition is open to any Society or Internet Group resident at the Festival of Fishkeeping weekend at Mill Rythe, Hayling Island, 8<sup>th</sup>-10<sup>th</sup> October 2010. Maximum of two entries per Society, one tropical and/or one coldwater is available. Entries will be limited to 10.

A Tetra AquaArt 60 Litre aquarium with hood, light, filter and heater will be provided. Gravel, any ornaments and fish must be supplied by the competing Society.

The new **Residents' Furnished Aquarium Competition** will feature the same size tanks and equipment, supplied by Tetra, and the winning furnished aquarium will be chosen by a judging panel comprising three VIPs at the Festival. Their individually-awarded placings will be awarded 'Place Marks' from 1-10, and the aquarium with the highest total of such marks will be declared the winner. The winning individual will receive

**FREE WEEKEND ACCOMMODATION  
at the 2011 Festival of Fishkeeping  
and a Tetra 60L Aquarium Kit.**

The Runner-up Individual will also receive a **Tetra 60L Aquarium Kit**.

This Competition is open to any individual resident at the Festival of Fishkeeping weekend at Mill Rythe, Hayling Island, 8<sup>th</sup>-10<sup>th</sup> October 2010. Entries will be limited to 10.

**SPECIAL NOTE** Live plant packs will be available, together with artificial plants, to competing Societies and individuals, although all competitors are, of course, free to supply their own plants should they so wish.

If you wish to enter either of the Competitions or require more information, I can be contacted by:

**Email:** [peter154anderson@btinternet.com](mailto:peter154anderson@btinternet.com) by 'phone: 01753 882873  
via the '**CONTACT US**' button on the FBAS website – [www.fbas.co.uk](http://www.fbas.co.uk)  
or by writing to me at:

**4 Cophthall Close, Chalfont St Peter, Buckinghamshire SL9 0DH**

I hope to hear from you soon – I'm accepting entries on a 'First come, first served' basis - and look forward to seeing everyone at the Festival.

*Peter Anderson*

# GET IT RIGHT IN 2010 !!

**There's a harsh truth to be told to Society Show Secretaries across the land - GUPPY CLASSES ARE SHOWN INCORRECTLY IN MOST SCHEDULES!**

Current received wisdom goes as follows:

Oa = Male Guppies Ob = Female Guppies - right? **WRONG!**

According to the Show Class Lettering System in the 2008 issue of the FBAS Constitution (page 4-4) Guppies are to be shown in Class O, with the relevant sub-divisions where necessary:

**Male Guppies** = O a-q (depending on finnage/tail shape)  
**Females Guppies** = O s-y

The whole paragraph is shown below:

<b>O. POECILIA RETICULATA (GUPPIES).</b>		
<b>Males.</b>		
Oa. Roundtail	Of. Bottomsword	Om. Long Dorsal Veil
Ob. Cofertail	Og. Doublesword	On. Short Dorsal Veil
Oc. Speartail	Oh. Lyretail	Oo. Deltatail
Od. Pintail	Oj. Scarftail	Op. Fantail
Oe. Topsword	Ok. Original Veil	Oq. Dovetail
<b>Females.</b>		
Os. Roundtail	Ov. Scalloptail	Ox. Cofertail.
Ot. Superba	Ow. Wedgetail	Oy. Naturaltail
Ou. Metropolitan		

Just think, all this time those female Guppies were really Cofertail males!

**Note:** It pays to keep up to date with the Constitution!

You can get a copy from the Merchandising Officer  
15a Queen Street, Desborough, Kettering,  
Northants NN14 2RE  
tel: 01536 761736

## SHOW & EVENTS DIARY 2010

(full details can be found on FBAS website [www.fbas.co.uk](http://www.fbas.co.uk))

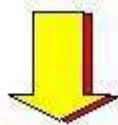
CATFISH STUDY GROUP CONVENTION	5-7 <sup>th</sup> March
NW CICHLID GROUP Meeting	7 <sup>th</sup> March
SHEAF VALLEY A.S.AUCTION	8 <sup>th</sup> March
A of A AGM	20 <sup>th</sup> March
GOLDFISH SOCIETY OF GB AGM	20 <sup>th</sup> March
BIRTLEY A.S. AUCTION	21 <sup>st</sup> March
B.L.A. SPRING AUCTION & GUPPY 2 <sup>nd</sup> Round	21 <sup>st</sup> March
CATFISH STUDY GROUP Meeting	21 <sup>st</sup> March
WEST LONDON BKA Meeting Weybridge	28 <sup>th</sup> March
ROBIN HOOD OPEN SHOW & AUCTION	4 <sup>th</sup> April
ASHBY OPEN SHOW & AUCTION	11 <sup>th</sup> April
MID-SUSSEX A.S. OPEN SHOW	11 <sup>th</sup> April
PRESTON & D.A.S. AUCTION	11 <sup>th</sup> April
KIRKALDY A.S. OPEN SHOW & AUCTION	18 <sup>th</sup> April
W.A.S.P OPEN SHOW & Auction	18 <sup>th</sup> April
CATFISH STUDY GROUP Meeting	18 <sup>th</sup> March
CASTLEFORD A.S. AUCTION	21 <sup>st</sup> April
RYEDALE A.S. OPEN SHOW & AUCTION	25 <sup>th</sup> April
STROOD OPEN SHOW	25 <sup>th</sup> April
TONGHAM OPEN SHOW	25 <sup>th</sup> April
GT MANCHESTER CICHLID GROUP AUCTION	25 <sup>th</sup> April
HOUNSLOW & D.A.S. BRING 'n BUY	28 <sup>th</sup> April
SOUTHEND, LEIGH & D.A.S. OPEN SHOW	1 <sup>st</sup> May
CORBYS & D.A.S. OPEN SHOW	9 <sup>th</sup> May
SHEAF VALLEY OPEN SHOW /AUCTION	9 <sup>th</sup> May
GOLDFISH SOCIETY OF GB MEETING	15 <sup>th</sup> May
CATFISH STUDY GROUP	16 <sup>th</sup> May
GLENROTHES A.S. OPEN SHOW & AUCTION	16 <sup>th</sup> May
PORTSMOUTH A.S.	16 <sup>th</sup> May
S.T.A.M.P.S OPEN SHOW & AUCTION	23 <sup>rd</sup> May
A of A AUCTION	23 <sup>rd</sup> May
SOUTH HANTS BKKS OPEN KOI SHOW	30-31 <sup>st</sup> May
CLUB 2000 AUCTION	30 <sup>th</sup> May
<b>FBAS ASSEMBLY</b>	<b>5<sup>th</sup> June</b>
MIDLAND CHARITY AUCTION	6 <sup>th</sup> June
CROUCH VALLEY BKKS KOI CLOSED SHOW	11-13 <sup>th</sup> June
BRACKNELL A.S. OPEN SHOW	13 <sup>th</sup> June



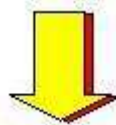
T.T.A.A. OPEN SHOW & AUCTION	13 <sup>th</sup> June
GROCKLEMANIA	18-20 <sup>th</sup> June
CASTLEFORD A.S. AUCTION	20 <sup>th</sup> June
CATFISH STUDY GROUP Meeting	20 <sup>th</sup> June
ISLAND FISHKEEPERS OPEN SHOW	20 <sup>th</sup> June
35 <sup>th</sup> BKKS NATIONAL SHOW	26-27 <sup>th</sup> June
BRISTOL TFC	26 <sup>th</sup> June
PRESTON & D.A.S. AUCTION	27 <sup>th</sup> June
U.S.A. OPEN SHOW & AUCTION	27 <sup>th</sup> June
MIDDLESEX SHOW	4 <sup>th</sup> July
WEST LOTHIAN A.S. AUCTION	4 <sup>th</sup> July
NW CICHLID GROUP Meeting	4 <sup>th</sup> July
Y.A.A.S OPEN SHOW/AUCTION	4 <sup>th</sup> July
GOLDFISH SOCIETY of GB Meeting	10 <sup>th</sup> July
RYEDALE A.S. 25 <sup>th</sup> ANNIVERSARY DAY	11 <sup>th</sup> July
PORT TALBOT OPEN SHOW & AUCTION	17 <sup>th</sup> July
ESSEX SECTION BKKS KOI SHOW	17-18 <sup>th</sup> July
CATFISH STUDY GROUP Meeting	18 <sup>th</sup> July
SOLWAY A.S. OPEN SHOW/AUCTION	18 <sup>th</sup> July
SCCRS OPEN SHOW	25 <sup>th</sup> July
GT MANCHESTER CICHLID GROUP AUCTION	25 <sup>th</sup> July
FRIENDS OF YORKSHIRE OPEN SHOW/AUCTION	8 <sup>th</sup> August
CATFISH STUDY GROUP Meeting	15 <sup>th</sup> August
THREE COUNTIES OPEN SHOW	15 <sup>th</sup> August
PERTH A.S. OPEN SHOW & AUCTION	15 <sup>h</sup> August
CASTLEFORD A.S. AUCTION	18 <sup>th</sup> August
W.A.S.P AUCTION	22nd August
S.E. KOI 24 <sup>th</sup> OPEN SHOW	29-30 <sup>th</sup> August
<b>FBAS ASSEMBLY</b>	<b>4<sup>th</sup> September</b>
SHEAF VALLEY OPEN SHOW /AUCTION	5 <sup>th</sup> September
BKA CONVENTION	10-12 <sup>th</sup> September
MIDLAND KOI ASSOCIATION CLOSED SHOW	11-12 <sup>th</sup> September
FSAS AUCTION	12 <sup>th</sup> September
HOUNSLOW & D.A.S. OPEN SHOW	18 <sup>th</sup> September
CATFISH STUDY GROUP OPEN SHOW & AUCTION	19 <sup>th</sup> September
T.T.A.A THREE RIVERS SHOW & AUCTION	19 <sup>th</sup> September
GOLDFISH SOCIETY of GB OPEN SHOW/AUCTION	25 <sup>th</sup> September
BIRMINGHAM & MIDLAND KOI CLOSED SHOW	25-26 <sup>th</sup> September
FAIR CITY A.S. OPEN SHOW & AUCTION	26 <sup>th</sup> September
GT MANCHESTER CICHLID GROUP AUCTION	3rd October
<b>FESTIVAL OF FISHKEEPING</b>	<b>9-10<sup>th</sup> October</b>
PRESTON & D.A.S. AUCTION	10 <sup>th</sup> October

SCOTTISH AQUARIST FESTIVAL	10 <sup>th</sup> October
CATFISH STUDY GROUP MEETING	17 <sup>th</sup> October
HOUNSLOW & D.A.S. CLOSED SHOW	17 <sup>th</sup> October
KIRKALDY A.S. AUCTION	17 <sup>th</sup> October
STAMPS AUCTION	17 <sup>th</sup> October
SHEAF VALLEY A.S.AUCTION	18 <sup>th</sup> October
WEST LONDON BKA Meeting Weybridge	24 <sup>th</sup> October
BASINGSTOKE & D.A.S.	24 <sup>th</sup> October
NW CICHLID GROUP Meeting	7 <sup>th</sup> November
CASTLEFORD A.S. AUCTION	17 <sup>th</sup> November
GOLDFISH SOCIETY of GB Meeting	20 <sup>th</sup> November
SCCRS AUCTION	21 <sup>st</sup> November
<b>FBAS GENERAL ASSEMBLY</b>	<b>4<sup>th</sup> December</b>
CATFISH STUDY GROUP CHRISTMAS MEETING	12 <sup>th</sup> December
HOUNSLOW & D.A.S.CHRISTMAS EVENING	15 <sup>th</sup> December

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