



FEDERATION OF BRITISH AQUATIC SOCIETIES

BULLETIN

winter 2010
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BULLETIN

December 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

The Festival of Fishkeeping lived up to its tradition of providing an excellent weekend, but the event was overshadowed by uncertainty about its future.

With the venue undergoing a change of ownership, it was not unexpected that the Federation would be looking for another site for the 2011 Festival. What most of the people attending didn't know was just how close we came to losing the 2010 event itself. It was only through the strenuous efforts of the Festival Organisers, led by Joe Nethersell, that got us over the finishing line just in time to start the setting up – it was that close!

If goodwill, ambition and moral support were enough then we'd have a Festival immediately but everything has to be right; the venue needs to be self-contained and have entertainment programmes available for 'after-Show' hours. Setting up, accommodation and travelling costs for the visitors must be taken into account too. We are determined not to accept a lesser quality Festival just for the sake of having the event. Our visitors have come to expect the best and we are not going to let them down.

One reason for the delay of this issue was to include the latest Festival information. Well, it's excellent news but, tantalising Editor that I am, I'm asking you to turn a few pages to get the full details!

Well done, to our negotiating team for getting a better result than England's World Cup bid.

Malcolm Goss,
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THE AQUARIUM AT THE WORLD MUSEUM, LIVERPOOL

Text and photographs by David Marshall, Ryedale A.S.



In the 1850's Mr. William Brown, a wealthy Liverpool merchant banker, provided the land and finance, in exchange for having the road on which the building would stand named after himself, to enable the building of a beautiful neo-classic building that would house Liverpool's largest collection of antiquities and wonders of the natural world.

The impressive neo-classic building that houses the World Museum

With the exception of re-building that followed the ravages of World War II, the building and its contents remained much the same until dramatic improvements at the start of this Century, which closed the building for a number of months, doubled the amount of display space and created a beautiful new atrium that was first opened to the public in 2005. It was at this point that the title World Museum was used for the first time.

In March 2010 Sue and I paid our first visit to this wonderful place, one of the best 'free days out' in the U.K., since the building was re-opened. The galleries, spread over several floors, are truly amazing and house, amongst many other things, the biggest collection of Ancient Egyptian artefacts outside of Cairo, a U.K. Commonwealth collection that is stunning, natural history presentations that include 'living bugs' and plants, beautifully crafted biotopes from the age of taxidermy, fossils and a planetarium. All of the floors are easily accessed, by either lift or stairs, and have their own educational and toilet facilities.

However, for the purpose of this article, we will concentrate on the Public Aquarium display that is situated on the first floor and dedicated to native and tropical marine life. To show the various aquarium displays, which vary greatly in size and shape, to their full advantage, much of the display area, but not the aquariums themselves, is dimly lit and gives you the impression that you are in a cavern (perhaps this is a reminder that the smaller aquarium, which then housed tropical freshwater fish and goldfish as well, we had first visited here was housed in the basement).



The aquarium is a mixture of living and information displays.



Everywhere there are excellent information boards and loose-leaf books that contain information about the various themes and creatures on display.

As you enter the aquarium you find yourself standing next to a large cubed aquarium that is home to ‘tropical predators’ and here you can view Lyretail Grouper and various Lionfish. Moving on brings you to a wall in which three large and one small aquarium are home to tropical marine fish from the Indo-Pacific region.



The displays, the quality and variety of fish (from young Clownfish through to large Bannerfish) on show and the clarity of the water etc. can only be described as ‘stunning’.

One of the amazing Indo-Pacific displays

Next come eleven displays classed as 'Local rocky shores'. Here you can see the wonders of local marine life.

Magnifying equipment allows you to look at creatures as varied as Sea Bullheads, Stone King Crabs and Common Starfish in great detail.

On now to a larger display in which kelp is used as a background, in order to show just how glorious the colours of our native Wrasse are.

If I had to choose a highlight of the displays then for me it would be the large brackish display that had me speechless. A beautifully themed aquarium that is home to variously coloured Scats, Fingerfish and Archerfish, all of which are a living picture of health. The loving way in which all of the fish here are cared for is obvious. Thankfully, you can sit on a well-placed couch and just watch the various activity and inter-actions that go on in the aquarium.

The displays conclude with four large aquaria dedicated to life found around Anglesey. Of course no such aquaria would be complete without a display of Thornback Rays, while the Abyss houses some amazing Lumpfish.

Much thought and planning has gone into the aquarium at the World Museum. As you will already have guessed I was impressed by the displays and thoroughly enjoyed the time spent here.



What you require for a visit to the World Museum is a great deal of time. You can see everything in one day (as we did) but to see everything in detail you would, in all honesty, need a week.

Rays are popular native marine fish

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Liverpool
L3 8EN



THE FESTIVAL LIVES ON!

Following a series of meetings over a couple of very anxious months, the Federation of British Aquatic Societies is pleased to announce that the annual Festival of Fishkeeping will take place in 2011.

Successful negotiations with the Martyn Leisure Resorts and Hotels Group mean that the FBAS will be returning to one of its earlier Festival sites at the **Sand Bay Leisure Resort, near Weston-super-Mare.**

FBAS Chairman Joe Nethersell says "It is a great relief to me, and to the hobby in general, that we have succeeded in keeping the Festival alive on the aquatic events calendar; the hobby cannot afford to lose such a prestigious event which is so popular with trade, exhibitors and visitors each year."

"The venue, although familiar to many fishkeepers in past years, has undergone a fabulous refurbishment and I can assure everyone of a magnificent weekend from both the accommodation and entertainment perspectives. We have transferred the whole of the exhibition materials to the site and are already planning another superb aquatic weekend."

The dates for the Festival are:

Friday 28th October – Sunday 30th October 2011

**Prices: £130 per person for a 3 night stay
£110 per person for a 2 night stay**

Since we will be sharing the weekend at the Resort with other guests, **the accommodation for Festival Guests is limited to 260.**

So if you wish to attend then please book early.
Priority Reservations for previous Guests will be held until March 1st 2011.

Booking Forms will be sent out in January/February next year and will also be available on the FBAS websites. You can see details of the venue

**Sand Bay Leisure Resort, Beach Road, Kewstoke,
Weston-super-Mare, North Somerset BS22 9UR**

online at www.martynleisurebreaks.co.uk/

For more information, please contact Joe and/or Grace Nethersell on 020 8847 3586 or by email: joe@the-nethersells.fsnet.co.uk

ITS GETTING COLDER

During the last few days, temperatures have dropped. Looking at the weather forecast, they are due to plummet further over the next week. The experts say that snow is due tomorrow as I write.

For the majority of you with unheated ponds, it may surprise you that the water temperature is about 5°C at present; this is likely to drop further. Now is the time to take a few simple precautions like:

- Stop feeding completely if the water temperature is below 5°C. (feed sparingly from 5°-7°C)
- If you have a winter protective cover, it should now be on to reduce chilling – the cover will help to prevent heat loss and keep the water 1- 2°C warmer.
- Bypass any waterfalls, turn down the air (but leave some going). Do not stop the filter.
- If the pond water surface freezes, melt the ice to form a small hole to let the gases escape. Do not mechanically break the ice as the noise and vibrations can injure your fish. I had one person who broke the ice with a wood axe and phoned to say that his fish looked very stunned.
- Drain the garden hose and put it in the garage to make sure it's kept operational – our hose will freeze and block if left out. You may need to fill the pond in a hurry if you have a burst pipe etc.





North Denmark – early March 2010
Heron waiting for his ‘Full English’

- Keep a look out for Herons – you are more likely to get problems from predators like Herons during the winter when their natural food source is in short supply. We had our only attack last January.

This is one time in the year that a thermometer is most useful. Try not to let the pond water drop below 5°C. Koi will survive at lower temperatures but the risk of losses is far higher. Weaker Koi will go on their sides at about 2°C and swimbladders can be damaged.

A small aquarium heater which has a low energy consumption will give a bit of ‘background’ warmth and is a help.

If you have any worries about your pond or the behaviour of the fish, please give Gerry, Dave or myself a call.

Have a good winter season and keep warm

Rod & Gerry Isted
Koi Health Consultants
www.healthykoi.co.uk

tel: 01243 572762

Editor’s Note: This timely article was obviously written before the current cold period, but one can never be too early with precautions.

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and promote it any way you want to (e-mail, your web site, Facebook, Twitter...the sky's the limit!).

3. The three videos with the most views

by the closing date, win!

1st Prize: £4000 cash

2nd Prize: £1500 cash

3rd Prize: £500 cash

For full details on how to enter, along with tips on setting up a youtube account and advice on promoting your video [click here](#)

To see the entries already submitted [click here](#) (your video will be added to the list when you enter)

The closing date is the 25th February 2011 so there's plenty of time. It doesn't have to be complicated, just a little creative!

What are you waiting for?

Get Creative, Have Fun and GOOD LUCK!

THE NANO AQUARIUM REVOLUTION

by LES HOLLIDAY

Following the highly successful introduction of the Fluval Edge nano aquarium onto the aquatic scene, Hagen has now launched a whole new range of nano aquarium systems.

The **Fluval Edge**, due to its innovative approach to aquarium design, has generated a great deal of interest amongst new and advanced aquarists alike and proved that nano-sized aquariums are capable of creating an impressive effect whilst also providing an excellent environment for a wide range of interesting small aquatic life forms.



A further four new nano aquarium models are now being offered by Hagen, based on all of the same attention to versatile and innovative design and style.

Perhaps the most advanced of these, in concept, is the **Fluval chi** - a very stylish all glass, cube shaped aquarium available in two sizes; a 12" x 10" x 10" 19ltrs (4.2gal) and 16" x 10" x 10" 25ltrs (5.5gal).

The Fluval chi has been designed along Feng Shui lines, the literal English translation for which is 'wind-water'.

The guiding principle of this ancient expression of life style is to harmonise life by balancing it within the elements of nature. Aquarists already appreciate that watching fish making their way through the gently moving water of an aquarium has a soothing relaxing effect and the Fluval chi takes the calming power of aquariums to the next level by drawing on the ancient transcendental methods of Feng Shui to encourage enlightened owners of the Fluval chi to immerse themselves in the positive flowing energy of its constantly moving water and soft restful lighting.



This vertically oriented aquarium looks stunning in any setting and; thanks to the compact, easy to maintain foam and filter pad filtration hidden away in the center piece in the form of a cube suspended over the tank; water is kept crystal clear whilst the soothing sound of gently trickling water fills the room.



The filter cube is highly decorative and can be fitted with a pebble basket on top through which the water bubbles over, creating interesting water images. As an alternative, a plant basket can be slotted on top of the filter and filled with natural plants or Flival chi décor pieces. This unique filter also serves as a light canopy, furnished with 12 powerful LED lamps, to provide brilliant plant or décor illumination. These LED's should last a lifetime and operate on a safe low voltage basis. The larger, 25L model comes complete with a remote control to switch these lights on and off. A single, always lit LED shines upwards through the bubbling water fountain, creating a beautiful sparkle effect which looks great in a darkened room.

Flival chi aquariums have been available in the North America for a few weeks and many aquarists use them to house Bettas (Siamese Fighting Fish) and other fresh cold water and tropical fish. Most tropicals are not likely to fair very well here in the UK in an unheated aquarium like the Flival chi, however, although the choice is a little curtailed, coldwater tolerant tropical species like the close relative of the Bettas, the Paradisefish (*Macropodus opercularis*) and other suitable species such as White Cloud Mountain Minnows (*Tanichthys albonubes*) and most of the Danios including the Zebra Danio (*Brachydanio rerio*) are perfectly okay.

Fluval also supply a 25W compact heater, should you wish to transform your Fluval chi into a full tropical system.



Water plant enthusiasts are sure to be interested in another of the new Fluval nano models, the **Fluval Flora**.

This aquatic plant aquarium kit is equipped with all of the components to create the ideal aquatic environment for natural plants.

Slightly larger than the Fluval chi, this 30ltrs (6.6gal) all glass 12" x 12" x 13.75" model has a highly comprehensive specification which includes a Fluval purpose made nano internal aquarium filter, Fluval mini power compact lamp, mini CO² system and 2kg (4.4lb) of specially formulated plant stratum.

The kit also contains a comprehensive care guide, accessories like plant tongs and a thermometer, plus extras like Nutrafin Plant Gro and for décor a rock background molded from actual rock, adding realism to the effect.

Live aquatic plants make a stunning focal point bringing one of the fascinating elements of nature into ones own environment and the Fluval Flora effectively enables the creation of a mini-ecosystem ideal for aquatic plant life. The main basic requirements for strong healthy aquatic plant growth are clear water, balanced full spectrum light and ample nutrients. The Fluval Flora's excellent filter ensures efficient levels of filtration for clear water and a healthy environment and the full spectrum lighting from the 13w Fluval mini power lamp is designed to promote healthy plant growth, ticking another box.

Conditions abundant in plant nutrients are also provided from two main separate sources. The soft clay materials in the plant stratum are derived from volcanic ash from Japan, which is rich in minerals and slightly acidic. This substrate material is ideal for regulating pH as well as providing the plant roots with the elements they require. Plant stratum comes in 2, 4, 8kg bags: the grain size is 5mm, pH is 6.5 and calcium and phosphorus are added. It's recommended that this substrate matter is partially replaced once a year by siphoning off the top layers and adding new plant stratum material.

The other main nutrient provider is a purpose designed Fluval Flora CO² kit which allows full plant photosynthesis to take place and ensure that important nutrients are available to the plants to maintain vigorous, lush and vibrant growth.

This neat little kit fits securely and unobtrusively to the side of the aquarium and contains a 20g CO² disposable cartridge, which can provide 55 daily refills. All planted aquariums generally lack sufficient CO² and by incorporating a CO² system in the Fluval Flora this important nutrient is always readily available.



The Japanese word for shrimp is 'Ebi' and the **Fluval Ebi** nano shrimp habitat is designed to provide an excellent ecosystem for a whole range of popular shrimp species. There is no doubt that freshwater shrimps are becoming increasingly popular encouraging many aquarists to wish to extend their hobby to keeping these interesting and unusual subjects.

The variety of shrimp species becoming available also ensures that the shrimp aquarium is an option to suit everyone's taste.

Freshwater shrimps are not difficult to keep and can be kept in a shrimp aquarium with a minimum size of around 19ltrs. (4.2gal).

The Fluval Ebi has a volume well in excess of this at 30ltrs (6.6gal) and has the same dimensions as the Flora tank. These dimensions permit the choice of a large number of shrimp species options and currently more than a dozen popular species are available with more promised due to the flourishing market here in the UK, Europe and North America. There are species from temperate waters available but the two most popular nano shrimps are the Amano or Glass Shrimp (*Caridina multidentals*) and the Cherry Shrimp (*Neocarida herterpoda* 'Red' variety) which both would require supplementary heating.

The Fluval Ebi does not come equipped with a heater but has all of the other key components to provide an ideal habitat for freshwater shrimps.

These include Fluval nano filter, 13w Fluval mini power compact, balanced full spectrum lamp and 2kg (4.4lb) of specially formulated Fluval shrimp stratum. There are also beneficial extras like the Rock décor background, accessories such as a comprehensive care guide, telescopic shrimp net and a thermometer and useful care products including Shrimp Safe which makes tap water safe for shrimps and Shrimp Mineral Supplement containing minerals to establish the optimal General Hardness (GH) found in their natural habitats.

Extra touches like a glass cover to prevent shrimps from climbing out of the tank and ceramic décor hiding places (sold separately) to encourage natural behaviour and provide cover whilst molting, add to the comprehensive specification of this perfect shrimp habitat.

Hagen have also dedicated time to producing a new food formulation specifically for feeding freshwater shrimps. Fluval specialized shrimp food, in granule and tablet form, contains a special type of algae that is naturally rich in iodine which helps shrimps re-grow a healthy exoskeleton and protein levels which are down around 35 to 40%. Excessively rich protein can be a cause of potential problems during molting. Nutrafin Max spirulina flakes and tablets are also recommended, they contain only vegetable protein sources and are a suitable feed for dwarf algae feeding shrimp species.



No matter how little space you have available it's possible to find room for the last of the four newly introduced Fluval nano aquarium systems.

The **Fluval SPEC** is a tiny fully equipped nano system measuring 10" x 9.25" x 7.25" with a capacity of 7.6ltrs (1.7gal) and is ideally suitable as a desktop aquarium that combines style and functionality in one small package.

Frosted glass conceals the integrated 3 stage filtration with a Foam block for mechanical filtration, Bio Max biological media and Activated Carbon chemical filtration, a level of sophistication exceeding most expectations for an aquarium this size.

Whilst the filter can be considered very generous for the size of the aquarium, this does give a bonus in reduced maintenance. The inner compartment of this easy to maintain filter can be effortlessly removed for cleaning and all components are easily replaced at the allotted intervals. Hagen recommends the SPEC as an ideal habitat for small shrimps or snails, or simply as an ornamental, live-planted display.

The other main component is the high quality LED lighting system equipped with 31 powerful LED micro lamps with gooseneck for versatility and easy control on/off switch. This unit clamps securely onto the back of the aquarium wall and gives a long-term service without any form of maintenance or parts replacement.

Hagen's versatile new Fluval Nano Aquarium range certainly appears to herald a new future in home aquarium development and will be a joy to aquarists wishing to join the nano aquarium revolution. A range of stylish stands is also available.



For further information or to find a local stockist visit www.hagen.com



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THE EVOLUTION OF SHOWING FISH

With the Show season now over, it means cleaning and putting away the Show tanks, putting newspaper in between them to stop any damage till next spring.

My Club, Hounslow & D.A.S had its Open Show in September, the last FBAS Show of the season, before most of us set off to Hayling Island for the Festival of Fishkeeping. Not quite the end for Hounslow members who benched 72 fish at their annual Closed Show on a sunny Sunday afternoon in October.

As I put away my tanks, I pondered how showing fish had changed over the last 40 years. I am not talking about those 6" long Swordtails, body measurement only of course! Well I did not see any like that in size, but I did see Sailfin Mollies being shown in those plastic tanks that the Goldfish exhibitors still use. I say "Come on you Goldfish exhibitors why not get up to date?" These Mollies took up the whole of their tank space with smaller ones often benched in those tall sweet jars laid over on their sides, bit tough on the fish if the lid leaked!



Smaller fish were shown in what we called '4 X 4' jars, being square in shape with a screw-on lid. Often aquarists would make a box to take 2 jars - some boxes were made to take 6 jars - with insulation on the inside to stop the contents going cold. These jars, recognised by the FBAS, however were not ideal, as fish could not be seen clearly when either up under the lid or resting in a corner of the jar.

Guppy Breeders also had their own Show jar being very much like a pickle jar of that time with a metal screw lid, taller than the FBAS jar, although square, was smaller in size.

For larger fish framed tanks were used, but fish would still try to hide in the corners. Larger fish were shown in tanks that were of a standard size like 18 x 10 x 10 or 24 x 12 x 12 but some exhibitors had these tanks made up the odd inch shorter than a standard size making the fish look larger than it was. Some exhibitors also painted the tank frames all the same colour, was this to help with de-benching or let the Judges know who fish they were?

Some naughty exhibitors often resorted to adding a pinch of salt into the water; catfish like many other species would be irritated by this and would swim in a very lively way in their tank." Don't do this your fish could die in a most harmful way".

Then came the invention of silicone adhesive that would glue glass. As we know now, there have been no limits to the size of aquaria that can be put together in this way (providing the thickness of the glass is taken into consideration).



Then Brian Chittenden saw that niche in the hobby and made Show tanks of any size you require, complete with glass lid and painted black base. Many of these tanks had a raised base that showed bottom-dwelling fish at their best.

In recent times the FBAS now awards up to 10 points for 'Presentation' when judging fish, however other groups have been doing this for much longer.

I feel we all owe Brian many thanks for the thousands of Show tanks he has made and transforming the Show benches to the high quality appearance that we see today.

Malcolm Goss

ECHINODORUS
THE AMAZON SWORD PLANT

BY BILL RUNDLE,

PLYMOUTH FISHKEEPERS SOCIETY

The family *Alismataceae* comprises of some 12 genera, with about species of plants that grow mostly as bog plants, and only very occasionally as true aquatics, growing completely submerged. Included in the Family are the Water Plantains, which we find growing in our native streams and marshes and in our ornamental garden ponds, where they make attractive marginal plants.

The Genus *Sagittaria* is also a member of this Family and again species of these Arrowheads, to give them their popular common name, are found in our native waters and ponds and are also attractive aquarium plants, resembling *Vallisneria* in that form.

Also included in *Alismataceae* is a group of plants that I believe to be among the most important and interesting tropical aquarium plants. This is the Genus *Echinodorus*, the so-called 'Amazon Sword Plant.'

Although earlier separated as a Genus by Richard in 1848, the first description was done by Swiss botanist named Micheli in 1881. Unfortunately, most of the plant material that he used is unobtainable or through deterioration of his paper work, unusable today. In a major review of the Genus by N. C. Fassett, published after his death in 1954, the author paid tribute to the high quality of Micheli's work. He praised the detailed descriptions that covered all the points in those readable manuscripts that are still relevant today.

To help in the identification of several species, Micheli studied the falucid, or transparent markings in the leaves.



Echinodorus barthii

Fassett confirmed that these markings were visible, differing from species to species, but noted, however they are not easily seen. He cut a small hole in the top of his desk and placed a sixty-watt lamp in the drawer underneath and then viewed the illuminated leaf through the microscope.

A German botanist, Buchenan, described some 20 species in a review of *Alismataceae* in 1903, but we are indebted to D. Katel Rataj, a botanist from the former Czechoslovakia, specialised in the study of aquatic plants, who has extensively reviewed and brought up to date the Genus *Echinodorus*. Fortunately most of his material is available in English.

Echinodorus are found in Southern North America, Central and South America, where they grow as marsh plants. Some species grow with their foliage emerged for most of the time but their roots in wet heavy soil, these are usually large plants which are too large to grow in our aquariums. They attain a height of four meters. Other species grow sometimes submerged for part of the year. Several of our choice plants are in this group. Yet others grow as true aquatics and are submerged entirely.



Echinodorus 'Aqartica'

The leaves of *Echinodorus* form a rosette with the stems growing basically from the rootstock. Very broadly the leaves are in two forms:

Firstly some are wide and are either pointed or rounded at the top with a cordate base where it joins the stem, they are roughly spade in shape. The second shorter-stemmed group are mostly long and slender tapering to a point at both the tip and the base and are sword shaped, hence the popular name 'Amazon Sword.'

The flower stems can, in the larger species, grow to the height of a man, and may resemble the flowers of our Water Plantain; others float in the water and reach to the surface whilst lie prostrate on the bottom.

The flowers are three-petalled and sepalled and are usually white or, rarely, pink. They are bisexual, having both stamens and ovaries on the same flower. However, self-fertilisation is not possible in all species.

Rataj suggests that as a rough guide, plants with triangular leaf stems in section are self-fertile, while those with round stems are not, and so need pollen from a different plant in order to fertilise the seeds.

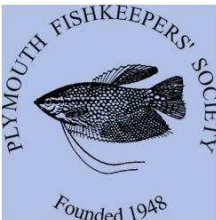
When fertilised the ripening seed heads from a spiky globular cluster. Each little single seed or more correctly, "Nutlet", has a break that points outwards. The cluster is called "echinate" meaning hedgehog shaped, and "dorvo" means tube. In this case, referring to the seeds, we are able to arrive at the origin of the generic name Echinodorus. The small nutlets may be perhaps 2mm long and differ slightly in shape from each individual species. They are therefore an important clue when endeavouring to identify the species.

South American species of *Echinodorus* are not found just anywhere in the Amazon Basin, certainly they are found in rivers where most our attractive Characin are collected.

Amazon waters are grouped into three types. The first are Black Water areas of the Rio Negro River, here particularly in the upper tributaries, conditions are much too acidic to support aquatic plant life - pH values as low as 4 are not uncommon. These waters might be fine for Cardinal Tetras, but our plants cannot grow or survive in these conditions.

Further down we find the second type, the White Waters of the Amazon. These waters are heavily loaded with silt, washed down from the terrain through which the headwaters flow. The White Water areas are subject to heavy flooding for long periods to depths of 12 meters or more. Few, if any, of our aquarium plants can survive this, apart from the depth of water, light penetration through these murky waters is minimal and photosynthesis could not take place.

TO BE CONTINUED



Please visit:

<http://plymouthfishkeepersociety.co.uk>

Location,
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Location
SULAWESI

Few people have heard of Sulawesi and many more would find it difficult to place it on a map. Its former name was Celebes so that may give a clue. Well, it happens to be part of Indonesia and is the eleventh largest island in the world. It straddles the equator so it is generally very warm. It also happens to be the place (as **Pete Cottle** found out later) where many aquarists want to visit. So what is the attraction?



The growing part of our hobby of collecting, keeping and breeding shrimps is the lure. In the Sulawesi lakes, there are many species of shrimp that are the attraction. These shrimps sell for very high prices in the aquatic shops and in Japan fetch a minimum of US\$6 each – making a shrimp cocktail very expensive! Shrimps were not however the reason I wanted to visit the Malilli lakes of Sulawesi.

The three main lakes hold some of the most beautiful and rare species of *Telmatherina* Rainbowfishes.



Most aquarists have seen or kept and bred the Celebes Rainbow *Marosatherina ladigesii* (note the name change from *Telmatherina*). Those are also native to Sulawesi but are found in rivers not the lakes and are in the south of the country. The lake fishes are rarely exported mainly due to purely logistical reasons and to the fact that they stress very easily.

The lakes of Matano, Mahalona and Towuti are situated at the end of a nearly 500 mile road with no hotels in between. So it is a question of leaving Makassar (the main airport) and driving overnight to Soroako on Lake Matano.



The road is a narrow two-lane highway that in parts is good, in parts is bad and in parts downright awful!

Add to that, express coaches that take no prisoners and will literally take up all of the road, then it becomes quite exciting. It takes a minimum of 16 hours to get to Soroako and having got there, the only thought is HECK we have to go back along that road! Literally, everything has to be taken from Makassar. Large strong poly bags, oxygen cylinder, seine nets, polystyrene boxes etc all have to be carted there and back.

To take all we had a large 4 x 4 plus a van. Our party composed of John, an exporter from Jakarta, Vincent an Arowana breeder from Kalimantan, Koo San a fish breeder also from Jakarta, Sandy plus three guys from Makassar (the catchers), Dr Karel Zahradka from Prague and me. Our first lake was Matano and here we found several species of *Telmatherina* plus Gobies, Halfbeaks and *Oryzias matanensis*. Matano is a large lake, very deep at some 1900 plus feet and some 18 miles long by 5 miles wide. Fortunately around the edges, it is quite shallow.

Undoubtedly the star of the catch was *Telmatherina sarasinorum*. The yellow was so vivid and my 'field' photo does not do it justice.

We did not fish Lake Mahalona as there are no suitable boats there. Lake Towuti is even bigger than Matano, some 30 miles long by 18 at its widest and around 600 feet deep. We spent two days here sampling various locations. At one location, we netted the superb *Tominanga sanguicauda* – another 'Rainbow.' This particular one was the gold form and was really beautiful. John decided that this one was going back to Jakarta so it was placed in about ten litres of water for the journey back. It had several water changes before it reached Jakarta and is still alive and well living in John's show tank. We also caught several other examples of this species but they were all the 'normal' silvery morph. This species in particular is very prone to stress. I placed one fish in a photo tank and it promptly died within seconds. They dislike handling intensely so one has to be very careful. This also applies to a certain extent to the *Telmatherina* species as well. While fishing for the 'Crystal Red' shrimps, we found a superb small Goby – *Mugilogobius rexi*. This small bright yellow Goby is only found as individuals under pieces of stone or rock so each one has to be caught separately. We eventually caught ten and these are now in one of Karel's aquaria in Prague. Several species of Halfbeak came to the nets the most stunning of which was *Hemirhamphodon megarhamphus*.



When we think of Halfbeaks, we inevitably think of *Dermogenys pusillus*. This relatively small Halfbeak attains a size of no more than 7cm. *H. megarrampus* is in comparison a giant. The ones we were catching were at very least double that and some were as big as 18cm. For some unknown reason I forgot to take any pictures of this beautiful species.

The water in the lakes is crystal clear and we were able to observe Rainbows spawning quite freely. In this environment, they are egg scatterers and we spent ages trying to find the eggs. We did eventually find just one egg attached to a plant. There was no point in keeping it so it was returned to the lake.

This was a commercial catching expedition so when we had around a thousand fish, we halted all fishing. Water changes were done night and morning and before shipment from Makassar to Jakarta. The survival rate to Jakarta was good and it is hoped that some species will soon be available throughout Europe. Temperatures of around 28°C are necessary to keep these species in best condition.

I brought three pairs back and each pair was placed in a separate tank. They fed well on *Tubifex*, Bloodworm and flake foods and were really looking well. At this stage, I thought I had cracked it as they were starting to show off and I was hoping that spawning would take place. After four weeks one morning I noticed that each fish had one or two 'white spots'. I immediately dosed each of the tanks and raised the temperature from 27° to 30°C. By 5pm they were literally smothered in White Spot with barely a space in between each spot. There was little else I could do other than add another dose of cure. I did this to one tank and left the other two. When I went to close up the fish house that night all fish were dead.

Having been with me for four weeks, why did the White Spot occur? They had not recently been subject to stress. Had they all been carrying it in a dormant state and for unknown reasons it flared up? Only few imports have reached the UK and of those I believe that all fish succumbed before they actually reach the selling stage in the shops. We need to know an awful lot more about the required water conditions for these species.

Peter W.Cottle

SMARTEN UP YOUR OPEN SHOW

It's all about attracting new faces into the hobby. Most of the visiting public to Open Shows will love to see all the fishes but, oh dear, what do all those Show Class Letters mean?

Many will go away thinking that they're being invited into another incomprehensible world - this time the local Fish Club - where they'll be at a total loss about what's going on.

Help make potential new members understand things right from the start with these highly attractive

SHOW CLASS LABELS



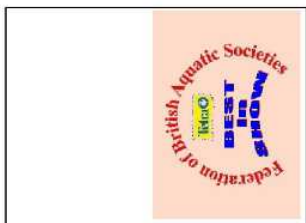
Available in **FULL COLOUR**, they've got fishes and common names that most will recognise and will direct people to their favourite species.

There are also popular **AWARD LABELS** such as 'Best in Show,' 'Best Exhibit,' 'Best Coldwater,' 'Best Junior' etc.

Download a set of these Class Labels from the **FREEBIES** page on the FBAS website (www.fbas.co.uk) . You get two pictures per A4 sheet, and then simply print them out - using photographic paper is best - separate them, and pin them up around the Show Hall.

You may get visitors to the Show curious about the actual fish shown on each card. Don't worry if you don't actually know either - you have a choice of having the name of the fish on each Card named in the collection or not - simply choose when printing.

TIP: Should you prefer (or also require) smaller 'Showbench level' copies, simply select A5 paper size in the **'Scale to paper size'** box in the Print Dialogue box before printing.



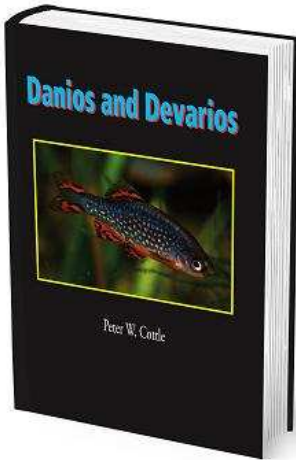
For the Award Labels, also available two to an A4 page, simply print out the whole page, cut in half to form two separate labels, then fold to form a 'Tank top' display.

You may care to go one step further and laminate them for continued use over the years.

HAVE YOU READ?

Danios and Devarios

by
Peter W. Cottle



Anyone who knows Pete Cottle, knows that he is obsessed with Danios and Devarios.

Naturally, he wants everyone to share his passion so, to alleviate the confusion surrounding these beautiful fishes (especially with so many new discoveries coming on to the scene), he has self-published this new book.

The author's credentials to write about such a singular subject are eminently suitable: for more years than he would care to admit, Pete has not only kept fishes but has also been immersed in the hobby itself as a Judge and Speaker for the Federation of British Aquatic Societies and, in more recent years, has travelled extensively in India, Myanmar and the Far East on collecting trips.

Pete has kept the practical keeping of Danios down to the absolute minimum and asserts that these very hardy species are, generally, no problem to maintain although decoding the secrets of the breeding requirements of some of the newcomers may take time. Pete also admits to being a little set in his fishkeeping ways, eschewing 'tank cycling' whilst still putting his faith in *Tubifex* as a disease-free, live food.

Obviously an experienced practising aquarist who knows what works for him, the author describes the basic breeding set-ups that have proved successful – personal case histories include *Danio rerio*, and *Devario chrysotaeniatus* - but suggests that there is always room for further experimentation, a case in point excellently described by Ivor Hilton in a separate, superbly observed spawning of *Danionella translucida*.

The following genera (covering 103 species) are described:
Danio, *Danionella*, *Devario*, *Betadevario*, *Microdevario*, *Esomus*,
Microrasbora, *Chela*, *Laubuca*, *Malayochela*, *Paedocypris* and
Sundadanio.

With such an expansive list, and considering the timescale between the earliest described (1822) and only last year's newcomers, keeping the essentials for each species down to manageable proportions must have been a headache. On one hand there might have been pages of material (but no photographs) or plenty of digital photos but no practical information!

Information is presented under the following headings:

Scientific Name, Common Name, Origin, Size and Comments.

In addition to the required species illustrations, pictures of natural locations on one hand and laboratory-based micro-photography showing egg developments on the other all help to make this book more than just another identification parade.

The Bibliography lists 20 or so contemporary sources of information and the author considers himself to be very fortunate in having many aquatically-interested friends (accordingly acknowledged) who willingly allowed him to use their photographs.

Dr Ralf Britz, of the British Museum (Natural History), has contributed an historical overview of previous ichthyologists who have made Danios their speciality, and there is no doubt at all that Pete should be also be included in this prestigious list. It cannot be too long before someone (if it's not Pete himself) who discovers *D.cottle!*

This modest volume – well, Pete would describe it so although Sven Kullander goes much further and heads his opening notes 'Passion' – is quite simply the most comprehensive study of the Danionins so far.

The book (ISBN 978-0-9567206 -0-3) is priced at £25.00 and can be ordered directly via the Danios and Devarios website: www.danios.info

EXCLUSIVE

Nicked for gulping goldfish in pet shop

By ROBIN PERRIE

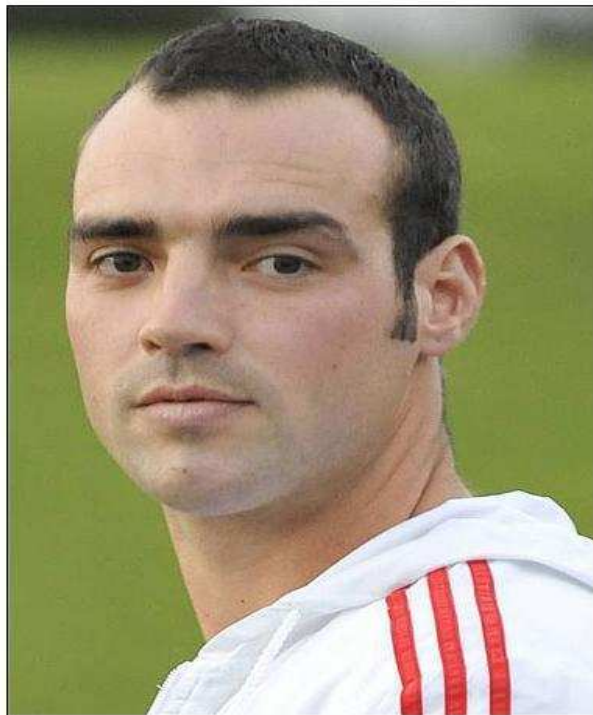
Published: 25 Sep 2010

A YOB bought a goldfish in a pet shop - then GULPED it down in front of horrified staff.

Cruel Chris Caswell was arrested yesterday over the sick stunt that was videoed by his giggling pals and posted on Facebook.

The lout, 30, paid £1.99 for a fish then asked staff to put it in a glass he had brought along, claiming he lived just across the road.

A puzzled shop worker agreed - then watched in horror as he downed the fish in one swallow.



Arrested ... Chris Caswell

North News & Pictures

After Caswell ate the creature, his pal doing the filming crowed: "Goldfish down the hatch!" The yobs then marched out of the shop cackling and joking.

Police were alerted after the appalling footage was posted on the web.

Roofer Caswell was arrested in a dawn raid at his home in Newton Aycliffe, Co Durham, yesterday on suspicion of cruelty to animals. He was quizzed at a police station for an hour then released.

The yob last night insisted he was an animal lover and it was just a prank.

He bleated: "It was over a year ago. We had been out drinking at a friend's party. I can't remember much about it. I have just got a puppy. I like animals."

The RSPCA last night said it was still probing the stunt at the Petals and Pets shop in Newton Aycliffe.

If Caswell is found guilty of animal cruelty he could face a £20,000 fine or six months in jail.

ASK US

Q: Do you have any comments that might help me as a health and safety inspector with the new fast growing "Fish Spa Pedicures" using Garra Rufa fish? I have just found your website as I was looking for guidance with what they should do with the dead ones and have found some info in your CoPs about this.

One particular question - is the use of vinyl gloves OK in the water with the fish - as I have to take some microbiological water samples and the other question relating to this - should the operator wear gloves or is the risk of infection low, and if not wearing gloves should hands be washed ASAP especially if going to eat ood - I'm not sure how high the risk of contracting something is. Julia Deighton

A: What a different enquiry! As you have noticed from our Codes of Practice with regard to disposing of dead fish (or even water from a dead fish's tank) we have tried to cover as many eventualities as our fish-orientated brains can imagine. To our minds, incineration of dead fish appears to be the most logical (and most final) method to take when disposing of the corpses.

Of all the illnesses that might be taken up from any aquarium, tuberculosis is the one most commonly encountered or quoted - although cases are very few and far between – and information is readily available on the internet.

The use of any kind of protective glove ought to be welcomed providing that they do the job to protect the wearer but do nothing to contaminate the surrounding water if further tests are to be carried out. Maybe highly-perfumed 'Marigolds' are not quite the ideal glove for this purpose!

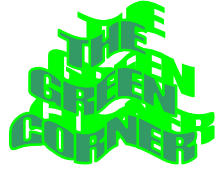
It also occurs to us that the overall hygiene of the treatment tank's water should be kept at optimum levels – is there any form of disinfection carried out between individual customers for instance?

Is this water filtered by a central system using UV or similar?

What happens to 'epithelials' (as frequently quoted by CSI folk) ie, dead skin removed by the fish but not ingested by them?

Precautionary steps such as hand-washing after any immersion in the treatment tank's water by everyone concerned seems eminently advisable.

The area for aquatic plant-lovers



Pogostemon erectus

Family: Lamiaceae

Distribution: South-western India

Sometimes you come across a plant that just blows you away with its appearance and, of course, its effect on that of the aquarium.

This new plant was spotted during a visit to Aquajardin Southampton, and Malcolm lost no time in buying a specimen. Subsequently, it even took a Card at an Open Show!



Whilst apparently 'new' it has been imported under the incorrect name of *Rotala verticillaris*. It makes a stunning central clump and will stay reasonably bushy under bright light. It will, as do all plants these days, benefit from CO₂ injection and feels 'hard' enough (a bit like Hornwort) to make algae removal physically easy.

B L O O D

RUPERT BRIDGES, OF TETRA, SINKS HIS FANGS INTO A GORY SUBJECT

It may not seem like the most obvious topic for an article, but the blood of fish plays a pivotal role in many processes that are vital for health and condition. These include oxygen transport, maintenance of the salt/water balance, nutrient transport, the immune system and removal of waste products. In this article we will look at some of the components of fish blood and what their significance is.

Circulatory system

Unlike mammals (and humans), fish have a single circulatory system. In other words, blood is pumped from the heart to the gills, and then straight on to the rest of the body. Oxygenated blood leaving the gills is delivered to the different parts of the body where its oxygen is removed for respiration. The resultant de-oxygenated blood is then returned to the gills and re-oxygenated again.

Blood

On average, fish contain around 2-4ml of blood per 100g of bodyweight (compared to around 6ml in humans), although this can vary depending on the species in question. The blood itself is made up of red and white blood cells, platelets (or thrombocytes), along with plasma that carries proteins, waste products and various other dissolved substances. By acting as a carrier for many important substances, blood plays a key part in maintaining health.

Red Blood Cells

Red blood cells, or erythrocytes, are responsible for transporting oxygen around the body. They contain a pigment called haemoglobin which binds the oxygen that diffuses into the blood across the gills.

Although a small amount of oxygen can be carried dissolved in the blood, the presence of haemoglobin increases oxygen carrying capacity significantly (from around 0.5-0.9ml/100ml blood to 5-16ml/100ml blood).

The number of red blood cells in the blood is related to the physiology of the species in question and its environment. Under normal conditions, a healthy carp (Koi) will have around 1.2 – 1.75 million red blood cells per mm^3 of blood.

The ability of haemoglobin to carry oxygen depends on the concentration of hydrogen ions (H^+) in the blood; in other words, the pH level.

The lower the pH, the less oxygen they can carry. Because tissues in the body are constantly respiring, they are releasing carbon dioxide into the blood which decreases its pH. When the red blood cells arrive at the tissues, the lower pH causes haemoglobin to offload its oxygen. This can then diffuse into the tissues that need it. The blood pH remains low as it carries CO_2 back to the gills. Here it diffuses back out into the water, facilitated by an enzyme called carbonic anhydrase. The pH rises once more and oxygen can again be picked up and taken back to the body's tissues. The effect of the blood's pH on its ability to carry oxygen is known as the Bohr effect, and it is essential for supplying oxygen and removing carbon dioxide.

White Blood Cells

White blood cells, or leukocytes, constitute an important part of the immune system. There are four main types of white blood cell – thrombocytes (or platelets) which are involved in blood clotting), granulocytes, lymphocytes and monocytes. The granulocytes and monocytes are an important part of the non-specific immune system: a Koi's primary means of destroying any pathogens (disease-causing organisms) that enter the body. For example, monocytes are carried in the blood to the site of an infection and turned into macrophages – white blood cells capable of engulfing and destroying bacteria. Lymphocytes are important for the specific immune response and, as such, are involved in producing antibodies against pathogens and developing immunity against certain diseases. A healthy Koi will have white blood cell count of around 20-50,000 per mm^3 of blood.

Ions

The blood contains a number of ions (charged atoms) which are important for a variety of physiological processes, as well as maintaining a stable blood pH. The most significant of these are sodium (Na^+) and (Cl^-), with smaller quantities of other ions such as calcium, potassium and magnesium.

It is common to express the concentrations of the blood in milliosmoles (mOsm) per litre of blood (termed 'osmolality').

It is beyond the scope of the article to explain these units in depth. However, the total osmolality of carp blood is around 274mOsm, of which Na⁺ contributes 130mOsm, and Cl⁻ 125mOsm.

The important point is that the osmolality of soft freshwater is around 1mOsm, considerably lower than the fish's blood. This means that ions are continually trying to diffuse out of the blood and into the surrounding water, whilst water is trying to diffuse in.

Koi, like all fish, have mechanisms for preventing ion loss and actively taking them up from the environment, as well as getting rid of excess water. These processes are linked to pH regulation, in that Na⁺ ions are exchanged for H⁺ (hydrogen ions), and HCO₃⁻ (bicarbonate) is exchanged for Cl⁻ ions. A decrease in blood pH (caused by an increase in H⁺ ions) can therefore be corrected by increasing the intake of Na⁺ ions in exchange for getting rid of H⁺ ions, and decreasing the intake of Cl⁻ ions to retain more HCO₃⁻. Although the relationship between ion regulation and pH balance is not clear in all species, Koi certainly seem to be able to link Cl⁻ influx with HCO₃⁻ release.

Ultimately, the ion content and pH of the blood is essential to the health and condition Koi. Gill damage, stress or inappropriate water quality can all disturb this process and lead to suboptimal blood chemistry.

Glucose

Blood glucose provides a readily-available source of energy for Koi, and its levels can indicate general condition. Blood glucose levels tend to rise if fish are stressed, in order to provide extra energy. On the other hand, liver damage or prolonged starvation will decrease levels. For example, according to one study, a normal value for carp (Koi) may be in the region of 40mg/100ml blood, whereas long-term starvation (at 20°C) will see levels fall to 23mg/100ml. On the other hand, a stressful event will cause levels to rise: e.g. in carp exposed to a sudden temperature increase (12 to 22°C) levels rose to 83mg/100ml.

Protein

The plasma carries two main types of protein – albumin and globulins.

These proteins are involved in the immune response, preventing pH changes and maintaining the blood's osmolarity. The level of blood protein can indicate the condition of the fish.

This is because, under normal conditions, blood proteins are manufactured at roughly the same rate at which they are decomposed. If the blood protein level falls, a deficiency in dietary protein supply may be to blame. This, in turn, will leave the fish more vulnerable to infection. A Koi in good condition will have a total blood protein level of over 3.5g/100ml blood, whereas one in poor condition will have less than 2.8g/100ml. Feeding a good quality Koi food and avoiding long periods of starvation is important for maintaining blood protein levels.

Bilirubin

Bilirubin is a by-product of the breakdown of haemoglobin (from old red blood cells). The liver normally removes it from the blood and sends it to the gall bladder to be secreted into the intestine as bile (which aids fat digestion). If the liver is damaged for any reason, bile levels may increase. Therefore, elevated bile in the blood can indicate poor nutrition or other causes of liver problems.

Using blood chemistry information

It is clear that the blood has a wide range of important functions, but what is the relevance of this to us? Unlike human and animal medicine, blood parameters are not routinely used to diagnose fish condition or disease.

Blood parameters for assessing the condition of common carp (one and two summers old), from Schaperclaus (1991)*

Parameter	Level in healthy carp blood
Total serum protein (g/100ml)	>3.5
Albumin (% of total protein)	>20
Glucose (mg/100ml)	30-47
Leukocyte (white blood cell) count (number/mm ³)	20,000 - 50,000
Erythrocyte (red blood cell) count (number/mm ³)	1.2 - 1.75 million
Haemoglobin content (g/100ml)	9.7

*recommended values may vary between different references due to the effect of environmental influences and the age of the fish

It's therefore unlikely that you will ever need to apply these measures to your own fish. However, scientists and some manufacturers use knowledge of blood chemistry to improve the quality of the products and advice available to us.

For example, certain ingredients in fish foods can stimulate white blood cells to work more effectively. It's therefore possible to evaluate these immuno-stimulants by studying their effect on white blood cell activity. In addition, measurements of certain blood parameters can give valuable information as to the quality of nutrition supplied by a fish food. When coupled with more traditional measures of performance (growth, waste production etc), a much more complete idea of the quality of the diet can be gained. So although it may not be something we have to directly worry about, a good understanding of blood chemistry will influence the development of some of the products we use to care for our Koi.

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Fish Diseases: Schaperclaus (1991)

This article is reprinted from

Visit Tetra at www.tetra-fish.com



KNOW YOUR FISH



Scientific name: *Regalecus glesne*

Origin: Most oceans

Size: 10 metres

Hardly an aquarium fish, the Regal Oarfish is just one of those oddities that surface (pardon the pun) occasionally to the wonderment of those who get to see it.



Thanks to Mark Khoo (ex Hounslow member) for sending this news item from the internet.

RIVER·REEF

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POND CLEANING BY NUMBERS



Some people think Spring is the time to clean a pond but doing it before winter comes has many advantages.

Mainly, any decaying matter that would otherwise have decomposed during winter won't have the opportunity to turn into excellent 'algae food' for early next year.

Note: This short cleaning list deals with the pond's contents – plants and fish. You may wish to extend the job by cleaning the pump, filter media and UV systems too.

IT IS ALWAYS EASIER IF TWO OF YOU CLEAN YOUR POND – SOME OF THE WORK CAN BE HEAVY FOR ONE PERSON

1. Remove any net or Heron protection.
2. Use your pond pump by adding extra hoses to pump half of the water from your pond, or purchase pump for this job. Those with a smaller pond may well wish to use buckets.
3. **Switch off all electrics to the pond pump and lights.**
4. Cut down marginal plants (making them lighter) and then lift remainder out of pond.
5. Set up a holding tub with the cleanest of your pond water - to put fish in.
6. Set up air pump if you have too many fish for your container.
7. Wade in and remove any water-lily - you may have to saw root, if plant is too large and heavy, but watch that saw does not puncture the liner!

8. Catch all fish and other livestock (Newts etc.)
 9. Empty out remaining pond water.
 10. Using bucket, with dust pan and brush remove all debris, mud and muck (check for more livestock).
- WARNING** Don't use the wife's best dustpan and brush if you intend carrying on keeping fish.
11. Remove water-lily from its basket and cut into smaller rhizomes (roots) if necessary.
 12. Replant water-lily (and/or any extra ones) in separate baskets with new aquatic soil.
 13. Place water-lilies back into your pond.
 14. Cut off excessive root growth (using a saw) from marginal plants and replace into pond. Use bricks under pots if required so they stand at correct height, with the top of the basket level with the water's surface.
 15. Finally refill pond with tap water, adding de-chlorinator.

Reconnect power and restart filter/waterfall etc.

16. Check your fish for before returning to pond.
Any with physical damage or in poor health should be fed and looked after separately until they are fit to be returned.

PS. Don't forget to replace your net as Herons will be able to see your fish so much easier now.



**WE WISH ALL READERS
AND CONTRIBUTORS**

**A VERY HAPPY CHRISTMAS
AND A SUCCESSFUL NEW YEAR**

My Dream Fish



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

FBAS Multi-Media Officer, Peter Anderson would really like to breed an old favourite with better success than to date.

I like to think that with many years of fishkeeping under my belt, I am as good as the next man when it comes to breeding. Not, mind you, the really exotic species but the more common species which should (!) adhere to the general breeding characteristics of their genera.

I prefer the egg-layers as a rule, although I have been known to break out into a spawning of Humpbacked Limias from time to time, but usually Danios, Barbs and Fighters are my bag.

Those of you who saw the Conservation Stand at the 2010 Festival of Fishkeeping will know that there are many ways that we can thwart the fishes' appetite for new-laid eggs by furnishing the tank accordingly.

I have come adept at providing pieces of floating polystyrene for my Fighters under which they can construct their bubblenest, off-cuts of wide diameter plastic pipes are no strangers to my Dwarf Cichlid tank, making my own spawning mops is no problem but I do get many a strange look when I go into a toy shop to top-up my supply of egg-hiding marbles!

So, I ask you then, as I can do all that is necessary to get good results from well-protected eggs (apart from getting in the tank with the fish to lend them a hand), why is it that I have no success with the oft-quoted best beginner's fishthe Zebra Danio?



It's not that this fish won't perform for me, I've been ankle deep with fry sometimes. The problem is that every fry I have raised turns out to be deformed with a real bent back.

I've tried to fathom it out – I've religiously used healthy mixed stock from various, wide-apart sources to avoid the possibility of in-breeding – all to no avail. It's not that I have a problem with other Danios either, as I have managed a couple of the newer species such as *D.feegradei* and *D.auropurpurea*. It's almost got to the stage where I'm afraid to have another go with Zebras as I've convinced myself of the outcome!

I just wish I could say that I've managed it with what everyone else treats as a walk in the park!



FESTIVAL OF FISHKEEPING 2010

Of course there was the annual surge of interest, the excitement as to who would carry off the prestigious awards plus the pleasure of meeting up with old friends but the main discussion point was where would the Festival be held in 2011?

The answer can be found elsewhere in this issue – and thankfully it is good news – but what was the 2010 event like?

There was a good proportion of 'visitor participation' to be found whether it was getting as near as one dared to the reptiles, or voting in the two Furnished Aquarium Competitions.

Each day there were competitive fish shows to admire whilst the 'fish-widows' could find more things to their liking in the Craft Show.

Despite the relatively late start in setting up to due to last minute negotiations as to whether the Festival would actually take place, all was ready for the Friday evening start even after nearly a week of dreadful weather. Well done, the Festival Team.

The first events on a very packed Saturday were the Killifish Show, Catfish Show, the Laguna Koi Festival, the Goldfish Society of Great Britain Open Show, the British Open Championship and the first round of the Society Furnished Aquarium Competition (judged by the public) and the Final of the Individual Furnished Aquarium Competition.

RIGHT: INDIVIDUAL FURNISHED AQUARIUMS

Winner: Washington A.S.P. (aquarium shown lower right)





The **Conservation Stand** attracted much attention, especially from those unfamiliar with the diverse methods of fish reproduction.

Several tanks, in addition to a large 'natural habitat' aquascape, illustrated ways of furnishing an aquarium in order to accommodate these differences.



The first big final of the weekend was 'THE BRITISH OPEN'



1st : *Aulonacara baenschii* –
Terry Hewitt



2nd: *Rineloricaria* 'Rio Atabapo' -
Rob Thomas



4th: *V. heterospila* – Rob Thomas



3rd: *Channa pulchra* –
S & D Edwards



5th : *A. robertsoni* - TDC



6th: *Parotocinclus maculicauda* –
Roy Chapman

GOLDFISH SOCIETY OF GB SHOW:

**Best in Show:
Common Goldfish –
Ian Mildon**



**Best Single Breeder:
Metallic Fantail -
Bob Jones**



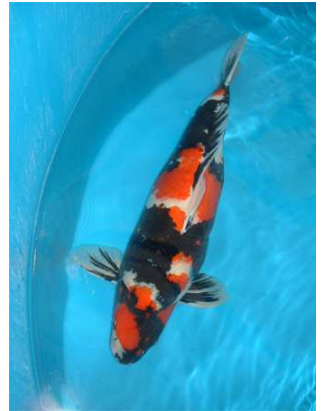
LAGUNA KOI FESTIVAL:

GRAND CHAMPION:

Size 6 Showa – Trevor Childs

**RIGHT: SOCIETY FURNISHED AQUARIUM
COMPETITION:**

**Winner: Hounslow & D.A.S.
(centre, right)**



SOCIETY FURNISHED AQUARIUM COMPETITION:



CATFISH SHOW:

Best in Show:
Corydoras pulcher – M. Kirkham



Reserve: *C.callichthys* – John Egan



Reserve: *S.angelicus* – M.Kirkham

KILLIFISH SHOW:

Best in Show:
Austrolebias charrua - Ellis Eyre



Reserve: *J.floridae* – Peter Qusted



Reserve: *F.gardneri* 'Jos Plateau'
Jack Finnigan

The weekend culminates in 'The Supreme' although we should not forget either 'The Supreme Pairs' or 'The Supreme Breeders' competition.



**2011 Supreme Champion:
Vieja hartwegi – TDC**



**2nd: *V.heterospila* –
Rob Thomas**



3rd: *A.baenschi* – Terry Hewitt



**5th: *Channa pulchra* –
S & D Edwards**

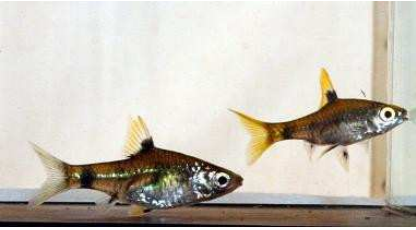


4th: *Y.cruciatus* – Stuart Brown



6th: *Y.cruciatus* – D.Kirk

SUPREME PAIRS:



1st: *P.gelius* – TDC



2nd: *P.fairweatheri* - TDC



3rd: *X.cortezi* - TDC



4th: *Hyalobagrus ornatus* - TDC



5th: *Xenotoca eiseni* – Jack Finnigan



6th: *Serpenticobitis octozona*-
Stuart Brown

SUPREME BREEDERS:



1st: *D.margaritatus* – TDC



2nd: *X.milleri* – Stuart Brown



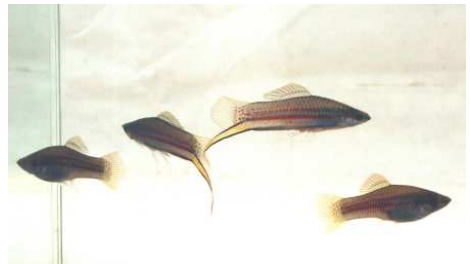
3rd: *P.quadrimaculatus* – TDC



4th: *Scleromystax kronei* –
Stuart Brown



5th. *Aspidoras spilotos* –
Stuart Brown



6th: *X.clemenciae* - TDC

FESTIVAL OPEN SHOW:



Championship Class B:
***Barbus gelius* – Alan Finnigan**



Championship Class Oa-q:
Male Guppy – Colin Bird

Best in Show:
***A. charrua* –**
Ellis Eyre



Reserve: *Thorichthys ellioti* -
S & D Edwards



Reserve: *P. fairweatheri* -
Allan Nortcliffe



Best Pair: *G. metallicus* -
Stuart Brown



Best Breeder: *Aspidoras* sp –
Stuart Brown







Whether you came for the fish or just the social scene, you all had a great time – and the weather held up too. See you all next year!

NOTE: The 2011 Festival of Fishkeeping will be held over the weekend of 28th-30th October (depending on Booking preference) at

**Sand Bay Leisure Resort,
Beach Road,
Kewstoke,
Weston-super-Mare,
North Somerset BS22 9UR**

For exhibitors: you will find all the necessary Show Schedules on the main FBAS website – www.fbas.co.uk and complete coverage on the dedicated Festival website at www.festivaloffishkeeping.co.uk

For wouldbe residents and Day Visitors: Full information and downloadable Booking Forms will be available on the previously-mentioned websites or can be obtained by contacting:

Grace Nethersell on: 020 8847 3586
email at grace@the-nethersells.fsnet.co.uk

For Trade Enquiries:

Please contact **Joe Nethersell** on: 020 8847 3586
email at joe@the-nethersells.fsnet.co.uk



KEEP ON TOP OF YOUR FISHKEEPING

The Bulletin offers some tips
you might care to follow in
the next few weeks

POND

Before it gets too cold, this is a good time to clean your pond, so often pond keepers think spring is the right time (See article **Cleaning the Pond**)

If you're not fully cleaning the pond, then clean out filter.

Disconnect/ turn tap off to fountains and squirters.

Leave only fast flowing water to remain operational, such as the waterfall.

Do not feed your fish when temperature falls consistently below 10°C (50°F).

If possible flash water through your pond so debris can float out and water goes clear. This well may take up to a couple of hours (this is if you are not doing a pond clean)

Remove any excessive amounts of underwater (fully aquatic) plants as many will die back and rot.

FISH HOUSE

For those of you (like me) did not take too many cards at Open Shows this season, this tip may help. Can you remember the poorly-supported Classes? Well, why not check out the fish at your local retailer, buy some and bring them on for 2011 season?

Check fish house insulation: winter's coming, and electric bills due to rise.

Check thermostat control for those using electrical space heating when it gets cold.

Check that all aquarium internal heaters are working. With aquariums that could still get cold, fit a second heater and be sure.

Set up aquariums for breeding fish when Show season ends and start conditioning your breeding stock.

Change 20% of all your aquariums that require a water change and top up, using a de-chlorinator.

Have containers at the ready for when it snows; melted snow makes great FREE soft water.

COMMUNITY AQUARIA.

Siphon debris off aquarium gravel.

Remove dying or decaying plant leaves.

Check airstones and replace with new ones if output has slowed down, check any tangled up and kinked air lines.

Always have a spare diaphragm for your air pump.

Clean inside glass of algae (let sucking type catfish do this for you!)

Use a ball of wet/damp newspaper to clean and polish the outside glass.

Try feeding with frozen foods available at your local shop.

Cut back cutting type plants that grow along the water surface stopping light getting to lower growing plants.

**Why not let the Bulletin know how your fishkeeping is going?
Have you any ideas or tips to share with your fellow fishkeepers?
Write or e-mail me, the Editor (address on the Editorial page)**

MALCOLM

INTRODUCTION TO CATFISH

Starting in the March 2011 edition will be a new series of feature articles on Catfish under the heading of Catfish -"Close Up".

As an introduction to this most enlightening series of articles, why not read Russell Lee's experiences with *Aspidoras fuscoguttatus*?

I brought five *Aspidoras* from my local aquatic shop who know me very well, in fact I brought my first aquarium from them. All were under 45mm, the shop owner said he had picked out three males and two females, and that they had only been imported about two weeks ago. I placed them in the only tank that had no fish in it, a 3 foot that was set up with rocks and plastic plants due to low light over this tank.

The temperature was 25°C and the water pH 7. They settled down very quickly and I started feeding them tablet, flake and frozen Bloodworm. But when I feed them Bloodworm they became very excited.

Three weeks after being placed in their tank one of the females had filled out and the males were constantly following her around the aquarium. As a normal maintenance thing I changed 20% of their water and the new water was cold and straight out of the tap. This lowered the temperature by the odd degree and once again the *Aspidoras* seemed very active.

The following morning before leaving the house I checked the tank and I could clearly see about 30 pale white eggs on the underside of a plastic plant (Amazon Sword). As I did not have the time to set up another tank I left and crossed my fingers hoping for the best. On returning from work, some 11 hours later, I discovered no trace of any eggs.

However seven days later when feeding the fish I noticed a couple of very small fry moving along the gravel, on closer inspection I spotted another, I was so excited! These small fry could only be seen at feeding time, but after weeks they could be clearly seen eating tablet food. At four weeks the fry appeared to be to be very dark in colour, almost black, apart from the dorsal fin which showed the mottled colour as in the parents.

At six weeks they are about 10mm and although shy, they have started sifting around with the parents and all are feeding well. Now I know they will breed, a tank can be set up in the future for this purpose. But I feel what a way to start my first experience of owning catfish!

Russell Lee

SHOW & EVENTS DIARY 2011

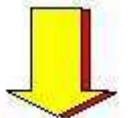
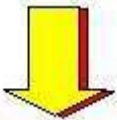
(full details can be found on FBAS website www.fbas.co.uk)

OASIS Auction	20/2/11
FBAS ASSEMBLY	5/3/11
Birtley Open Show	20/3/11
A of A	3/4/11
Solway Auction (new venue)	3/4/11
Mid-Sussex	10/4/11
Derwentside Auction	17/4/11
Southend	30/4/11
STAMPS Open Show	22/5/11
FBAS ASSEMBLY	4/6/11
TTAA Open Show	12/6/11
Bristol	25/6/11
Port Talbot	9/7/11
Derwentside Open Show Auction	28/8/11
FBAS ASSEMBLY	3/9/11
Ryedale Open Show	11/9/11
Hounslow	17/9/11
Three Rivers Show Auction	2/10/11
STAMPS Auction	12/10/11
BKA	23/10/11
FESTIVAL OF FISHKEEPING	28-30/10/11
OASIS Auction	20/10/11
FBAS AGM	3/12/11

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