FISHKEEPERS' AND WATER GARDENERS'

BULLETIN

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Fellow Fish keepers

Welcome to this March edition of the Federation's ***Bulletin***. This new look magazine starting with the last issue is now printed on the Isle of Wight.

In this issue we announce items of interest. We have an FBAS open show on Sunday 3rd July 2005 Trophy Classes. J, Xu-w and Z. The show will take place at the

Rose Community Centre, Hawthorne Road, Brentford, Middlesex.
(The Building where FBAS quarterly meetings are held)

The next piece of News, at this year's the Festival of Fishkeeping we will be welcoming Discus UK to the weekend. It is planned to have around 50 24" x 12" x 12" tanks of Discus on display for this event. The Festival has become so popular over the last few years that accommodation is now literally on a first come first served basis. Booking forms have gone out already to those who attended last year. So far just over 60% have confirmed that they will be attending. If you have not been for a few years I would suggest that you contact Grace Nethersell for a booking form ASAP on 020 8847 3586

If you have an article or comments for the June magazine please send it to me no later than the 31st April. Email: *bulletin_editor@fbas.co.uk*

Peter Furze - Editor

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INTERPET LAUNCHES NEW LIGHTING CONCEPT INTO THE UK

Interpet has long been at the forefront of aquarium lighting technology. The first triphosphor lamp (***Triton***) made a huge impact and has remained a market-leading lamp. Recent developments in Interpet's lighting range have included an upgrade of ***Triton*** to the new ***Triplus***, the new ***Daylight Plus*** lamps and improvements to the performance and appearance of ***Blue Moon*** and ***Beauty Light***.

Now Interpet is set to make its biggest splash in the lighting market for years, with the launch of its ***T5 Power Compact*** lighting range.

The range includes a complete range of lamps, starter units and aquarium luminaires, and provides consumers with some major benefits over traditional lighting.

T5 Power Compacts provide high output, space saving design. Added to the huge benefits in performance and space is the fact that using Interpet's ***T5 Power Compact*** lighting is likely to work out less expensive than using less effective, more bulky traditional T8 linear lighting.

The unique nature of ***T5 Power Compact*** lamps ensures there is only one end cap, thus making them much easier and more versatile to install. (No long end caps trailing all over the aquarium).

The lamps are available from an 18 watt 8.5 inch long lamp to a 55 watt 23 inch long version. Compare this high output to T8 linear and you can see the clear benefits.

(eg: 24 inch T8 lamp is 18 watt, 23 inch T5 PC lamp is 55 watts). Therefore you can use one T5 PC lamp and starter instead of 3 conventional lamps and starters.

HUMAN FISH

Freaky fish with human-looking faces are shocking internet users and television viewers in South Korea. The striking video has left people stunned that any such animal could exist.

Choong Chong Today, a South Korean newspaper, videotaped the two fish in a pond in Chongju, about 90 miles south of capital Seoul. Both of the weird-looking fish are said to be 19 years old. According to the reports, the hybrids were born from a carp and a leather carp. They are each 80cms long and 50cms in circumference.

The newspaper has quoted the owner of the fish as saying that their faces had started to look more and more human over the last couple of years.

FBAS TROPHY CLASSES 2005

The Trophy & Broach Officer has allocated the following classes for 2005. Clubs must of course be eligible, this by way of their Affiliation to the FBAS. The usual requirements regarding show schedules also apply ***Please make sure you have affiliated.*** Societies must send in their trophy application form.

B	Northampton	C	Washington
Ca	Corby	Ch	Bracknell
D	Bracknesham	Da	TTAA
Db	ASAS	De	Bristol
E	Northampton	Ea	Port Talbot
F	Strood	G	Hounslow
H	ASAS	Ha	Bracknell
J	FBAS Middlesex Show	K	Strood
L	Caer Urfa	La	Mid Sussex
M	TTAA	Me	IOW
Nb-m	Southend	No-t	Corby
On	Southend	Ob	IOW
P	Washington	Q	Caer Urfa
S	Port Talbot	T	Hounslow
Ta	Strood	V	Bracklesham
W	Mid Sussex	Xo-t	Bristol
Xu-w	FBAS Middlesex Show	Z	FBAS Middlesex Show

The UK Discus Association (UKDA)

By Dougall Stewart BSc. PGCE

The UK Discus Association (UKDA) is an internet based non-profit organisation that promotes the dissemination of information on the 'King of the Aquarium' the discus fish *Symphysodon sp.* Currently the club's focus is committee directed and we have over 700 national and international members including: hobbyists, professional discus breeders, retailers, authors, vets, publishers etc.

Membership to the club is free and recent club developments have resulted in our first annual meeting, dinner, and club visit, kindly hosted by Devotedly Discus. In addition, we are now in the entry and booking stage of the first ever UK Discus Association Championship which will be hosted at the ***FBAS Festival of Fish Keeping*** that will be held at Bracklesham Bay between the 14th-16th October this year.

The UK Discus Association Championship will consist of 50 tanks of discus this year and the categories are:

- Solid Red, Brown, Yellow – includes – solid brown, yellow, Marlborough, Melon, San Merah, Golden, Red Rose etc.
- Solid Blue, Green – includes – Blue Diamond, Cobalt, Ocean Green, Angel Blue, Super Angel Diamond, Violet Reflection etc.
- Spotted – includes – includes any colour with a spot, Leopards, Red Spotted Greens, Red Spotted Snakeskins etc.
- Stripe, Striated – includes – SnakeSkin any colour and no spots, pigeon blood all varieties, Turquoise – Blue, Red & Chequered etc.
- Wild – includes – Wild Brown, Wild Blue, Wild Alenquer etc.
- Open – includes – any colour variety not listed in classes 2 to 5

Pending final confirmation, the show is likely to include the presence of the world-renowned international judges, breeders, and show winners i.e. Jeffery Tan the President of the Discus Society of Malaysia) and David Lim (of Fishio Tribe, Singapore).

If you are interested in entering discus for the show, joining the club, or simply talking discus, I can be contacted at dougall@ukdiscus.com. Alternatively you can visit our site at http://ukdiscus.co.uk (main site) or http://forum.ukdiscus.co.uk (our electronic meeting place).

Next issue I will discus how to set-up a simple discus tank and I will hope to dispel some of the myths that surround these fascinating fish.

(See Cover Photograph - Ed)

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GLOW-IN-THE-DARK

By Quentin Dodd

GENETICALLY ENGINEERED FISH TRIGGER PLEA FOR COURT ORDER

Time was when people used to sit around a log fire on a cold winter's night. Now aquarium owners are moving towards watching, not the television, but fish that glow under 'black' light in a darkened room. However, the launch of GloFish, genetically-engineered Zebra fish, into the United States ornamental fish market has kicked up a legal dust storm.

The GloFish, created by adding a gene for fluorescence to the common black and white Zebra fish (*Danio rerio*), are produced by Segrest Farms of Gibsonton, and 5-D Tropical in Plant City, Florida, the sole licensed US producers and distributors. The fish first attracted attention back when the companies let it be known they intended to start selling the new fluorescent ornamentals.

The gene-splicing technology has been in existence for more than a decade. According to Yorktown Technologies of Austin, Texas, who license the technology, the first GloFish fish were bred by Dr. Zhiyuan Gong, an associate professor at the National University of Singapore, to help detect contaminants such as estrogen and heavy metals in waterways.

Zebra fish are usually black and silver-white in colour, but by using genetic manipulation, Dr. Gong was able to produce varieties that radiated green, red or yellow. The genes for fluorescence were extracted from jellyfish or sea anemones and injected into Zebra fish eggs to make the fish capable of fluorescing.

Fluorescence is caused by light being absorbed and then re-emitted at a different wavelength - hence the glow. To make the fish useful as alarms against different pollutants - each colour indicating a different pollutant - inducible gene promoters were used to act as control switches to activate different tissues in the fish.

With the genetically modified fish glowing brightly under ordinary fluorescent or halogen lights in daylight, or with ultra-violet (back light) in the dark, the first ever genetically engineered pet didn't take long to attract the attention of the home aquarium industry. But the GloFish also elicited expressions of concern from industry observers and opponents of this sort of genetic modification, whether it was for human amusement or consumption.

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Recognizing that the US Food and Drug Administration has jurisdiction over genetically-modified animals, Yorktown Technologies contacted the FDA to see if it planned to regulate the fish. The Center for Food Safety, along with Sierra Club, Greenpeace and the National Environmental Trust, also requested the USFDA, to ban the GE fish from being sold 'for fun and profit'.

However, according to YT co-founder and C.E.O., Alan Blake, the FDA - and other agencies the company had contacted such as the US Environmental Protection Agency and Department of Agriculture, and some state fish and wildlife agencies, declined to step in. The USFDA formalized that position in a statement issued in December last year: 'Because tropical aquarium fish are not used for food purposes, they pose no threat to the food supply. There is no evidence that these genetically-engineered Zebra *Danio* fish pose any more threat to the environment than their unmodified counterparts, which have long been sold in the United States. In the absence of a clear risk to the public health, the FDA finds no reason to regulate these particular fish.' Nor have they suggested a timetable for issuing a policy on the matter.

Two days after the FDA's decision, Yorktown Technologies announced that 'in response to overwhelming consumer demand', the two producer companies would start shipping limited numbers of the fish and that GloFish fluorescent fish would be available 'nationwide' in early January. Except in California. There, the Fish and Game Commission has banned the sale and purchase of genetically-changed fish. Both the State Commission and the National Academy of Sciences have said that federal regulation is needed. Nor did the FDA ruling sit well with some other organizations. In January, with the fish portrayed as the first transgenic species to be sold as a consumer product rather than for research, the International Center for Technology Assessment (CTA), an environmental advocacy group in Washington, D.C., and the affiliated Center for Food Safety (CFS) filed a lawsuit in the District of Columbia. They requested a court order stating that, as genetically-modified organisms (GMOs), the fish are subject to federal regulation and cannot be sold without going through a full assessment and approvals process. CFS Legal Director Joseph Mendelson claimed that the unregulated sale of GloFish provided a gateway for genetically-engineered fish to find their way eventually onto dinner plates, or into the environment. He charged that by refusing to regulate the fish, the FDA was establishing 'a dangerous precedent' for all future gene-changed animals, whether created for food or as pets. Paradoxically, the fish are currently going through an approvals process for import into Canada.

Yorktown Technologies responded that given the intense scrutiny the fish received before they went on the market, the fish are safe from all perspectives - including environmental. Any claims to the contrary being

without scientific merit. They suggest there is not so much a large controversy over the new fish, as there is a great deal of noise and dust being stirred up by a very small group of people, from a an ethical rather than scientific point of view.

The fish, which at present glow bright orange-red, or red-orange, reportedly sparked strong sales in the US, though one retailer was cited as acknowledging it might be a bit of a fad which could fade quickly. Aquarium owners might simply want to have something in a tank, which few others had. Yorktown Technologies plans to market yellow and green GloFish later in the year. It does not yet have the technology to produce fish that fluoresce blue.

The Company quoted the US Geological Survey as saying that there is not one wild Zebra fish population in the whole country, despite millions of non-GE Zebra fish being sold for nearly 50 years. YT stated that as a tropical species, Zebra fish wouldn't survive long in the wild in cooler US waters. Even in an aquarium, Blake suggested, the fish would not likely reproduce unless deliberately induced to do so, which would be an infringement of the Company's patents. Not only that, the fish tend to be cannibalistic and eat their eggs.

The Company also emphasized that the stocks of GloFish fish currently being sold, have not themselves been genetically altered. They are the naturally-spawned descendants of Zebra fish which have handed down their fluorescent qualities through spawning in the hatcheries.

YT will contributing part of the proceeds to Dr. Gong's laboratory at the University of Singapore, to help in his research. Dr. Gong, originator of the glow-producing process, reportedly began his research career by genetically modifying edible species of fish, but concern over food safety and possibly adverse environmental impacts meant that no GM varieties had ever made it to market, so he switched to ornamental fish. The marketing firm described initial sales as greater than anticipated: 5-D Tropical and Segrest Farms had indicated that initial interest was unlike anything they had experienced in more than 40 years in the tropical-fish business. Regional wholesalers had reported unprecedented sales, despite the one-inch fish costing retail customers about $5 each - five times more than their unaltered cousins. However, not all retailers and aquarium enthusiasts welcomed the new varietal, some suggested that researchers and companies were 'playing God' by changing the genes, and that it could have serious long-term consequences. One of the more extreme allegations charged that observers were being 'physically, aesthetically and recreationally injured - just from visual exposure to the fish!

Yorktown Technologies can be contacted through info@glofish.com or www.glofish.com

Taken from
Hatchery International magazine

CARING FOR AROWANA

By Rupert Bridges of the Tetra Information Centre

The common name 'arowana' is used to refer to any one of seven species of fish, found in South America, Africa, Asia, and Australia. They are all members of an ancient order of fish called the 'bony tongues' (suborder *Osteoglossoidei*), referring to the bony plate on the floor of their mouths. This plate is covered in teeth, which are pressed against teeth in the roof of the mouth when capturing and processing food. One of the world's largest freshwater fish, *Arapaima gigas*, from South America, also belongs to this group. These fish can grow to 4.5m.

The most common species kept in aquariums around the world is the South American arowana (*Osteoglossum bicirrhosum*), whilst the most impressive is the Asian arowana, or Dragon fish (*Scleropages formosus*). Both these species have large barbels on their bottom lip, which are used to detect prey wriggling at the surface. According to Chinese mythology, the Dragon fish is said to bring good luck and business success to its owner, as well as ward off evil.

Another interesting fact about these fish, is that they brood their eggs and young in their mouths. This protects them against predators, allowing them to reach a reasonable size before they are released. Mouthbrooding is performed by male *O.bicirrhosum* and female Dragon fish.

Aquaria for arowanas

Both commonly kept species of arowana are large, active fish, and therefore they require a big aquarium. *O.bicirrhosum* may grow to over a metre in length, whilst Dragon fish will normally reach around 90cm. Because of this, the minimum length of aquarium for adult specimens is 150cm.

Both species need good water quality, and so a powerful filter is essential. For *O.bicirrhosum*, a reasonable water current, coupled with good aeration is beneficial. Dragon fish also need good filtration, but the amount of water movement created by the filter and airstone must not be too great.

Because they are active and good jumpers (*O. bicirrhosum* can leap up to 2 metres to catch terrestrial insects), the aquarium needs a tight-fitting cover. In addition, some floating plants to provide cover are appreciated, as these fish can be nervous. Because of this, the aquarium must be housed in a quiet area of the building. It should also be kept out of sunlight.

Keeping other fish with arowanas is generally not recommended because of their nervous disposition. However, aquarists often put a large pleocostomus in the aquarium (e.g. *Glyptoperichthys gibbiceps*), to keep algae off the glass. These fish will remain on the base and sides of the tank, and are generally very peaceful. However, do keep a check on them as very rarely they may develop a taste for the mucus on the sides of larger fish.

Maintenance

Because arowanas are large carnivores they can produce a lot of waste. Therefore, it is advisable to change a portion of their water once every week or two. Change no more than 20% at a time, and ensure that new water is treated with Tetra AquaSafe to remove chlorine and heavy metals, and that it is the same temperature as the tank. The gravel

should be kept clean, ideally by using a gravel siphon every few weeks.

Buying arowana

It is relatively easy to get hold of *O. bicirrhosum*, although you should ensure that the specimen you purchase is settled (i.e. not freshly imported), and that it is feeding well. Dragon fish on the other hand are protected by C.I.T.E.S. (Appendix 1), which means that their sale from most parts of the world is banned. However, Singapore has special permission to sell them, as they are captive bred and therefore not a threat to wild populations.

Dragon fish are available in a number of different forms, each of which may command a different price. The simplest form is the Green Dragon fish, whilst the most revered are the Red, Axanthic, and Albino forms, with many other varieties in between. Ensure that the fish you buy is from a reputable source, as some suppliers have been known to use unethical methods to improve colouration such as blinding, exposure to sunlight, and the use of hormones. A reputable supplier will have used bloodline control, plus careful selection techniques, to ensure that the colouration is true, and that it will remain with the fish.

Introducing arowana to the aquarium

Once you have selected your arowana, it must be introduced to the aquarium properly, to ensure its survival. Float the bag on the surface for around 15 minutes to get it used to the temperature. Then slowly fill the bag up with aquarium water over a period of 45 minutes. This will allow the fish to adjust to the water chemistry of the tank. Sudden shocks in temperature, hardness and acidity can cause sudden deaths, or at the very least, stress.

Do not feed your new fish for at least three days to reduce energy use whilst it is still stressed. It is also a good idea to leave the aquarium lights off for a day or two (if you have any). Some Dragon fish breeders recommend that a temperature of 30°C should be maintained for the first week or so, to reduce the chances of bacterial infection. Alternatively, add a general anti-bacterial remedy to the aquarium, such as TetraMedica General Tonic. Reduce the temperature to 27°C for Dragon fish and 25°C for *O.bicirrhosum*, after this period.

Feeding arowana

Both *O.bicirrhosum* and Dragon fish are carnivores. Juveniles tend to feed on smaller insects, whilst adults will eat fish. This diet must be replicated in captivity, to keep your arowana in top condition.

This can be done with fresh and live foods, plus good quality dry food. Because live and fresh food results in a lot of waste and lacks certain essential vitamins and minerals, the bulk of the diet should be dry if possible. Foods such as Tetra DoroMin are based on large amounts of animal ingredients in a highly digestible format. They also contain essential nutrients and colour enhancers, to keep arowanas in top condition.

Juvenile arowana can be fed on dry foods 2-3 times a day, whereas adults only need 1-2 feeds. Occasional supplements with fresh foods, such as prawns, fish, live cockroaches, etc. are acceptable but ensure that they are well-washed. Any uneaten food should be removed immediately.

SEASONAL JOBS FOR THE FISH POND

By Les Holliday

It's about this time of the year that we leave the fireside or the cosiness of a central heated home and venture out into the garden to see how the fish in the pond have fared over the winter. The winter is a quiet season in the pond when fish remain dormant and plants die back to rest through the low temperatures of the winter period. Now as the pond season starts they will be moving up from the deeper parts of the pond where they have wintered away from the colder surface water and soon by mid or late April, when water temperatures reach 6° - 8°C (43° - 46°F), can be fed sparingly with a good quality food. Global warming seems to be extending the season as far as feeding pond fish is concerned and the usually recommended feeding period of May to September is now more realistically mid April through to early November in many parts of the British Isles. In fact by mid May stable water temperatures can have reached 10°C (50°F) when a full feeding routine can continue. I start a day by day water temperature monitoring routine in the early spring and my Laguna Floating Thermometer, which is ideal for the purpose, is left permanently in the water so that I can accurately assess stable seasonal increases in temperature. This prevents me feeding my fish during the short mild spells that come and go throughout the early spring months. It's really important to avoid feeding pond fish during these mild times as this can cause internal disorders if food retained in the gut is undigested when colder temperatures suddenly return.

Water quality in the pond can be quite variable at this time of the year depending on how diligent you have been through the winter in keeping the pool free of fallen leaves and dead plant material. It really is worthwhile netting a pond over the winter as gales are quite frequent and if left uncovered it is almost impossible to prevent decomposing leaves accumulating in the bottom of the pond. There is more to fear than just organic pollution if this does occur as the leaves of some trees can be toxic, a means they use to dissuade browsing predators. Laguna offer a range of pond netting in various sizes and a pond net is a wise low cost investment.

A quick test of the main water parameters using pH, ammonia, nitrite and nitrate tests will indicate how much of a deterioration there has been and it may be necessary to undertake a partial water change. Change up to 25% of the water in the pond if necessary using a water conditioner such as Laguna Water Prep to condition the tap water used. The biological filter will also require a good flushing out with pond water and the pump will need servicing by removing and cleaning the strainer and checking the impeller assembly for lime scale and refuse. If these chores are not attended to, pump performance

will be seriously affected. I like to also give the filtration processes a boost by dosing the pond and filter with biological treatments like Laguna Pond Clean and Pond Detox. Pond Clean contains live resting colonies of beneficial bacteria which remove organic solids and pond sludge whilst Pond Detox contains bacterial strains which effectively remove liquefied organic waste. Both of these treatments replenish standing colonies of beneficial bacteria and have a long lasting effect.

It will not be too long before we will be suffering the twin scourges of green water and blanket weed. I am often asked to recommend eco-friendly means of preventing the algae problem. Algae is encouraged by three factors, the presence of nutrients in the water together with warmth and strong sunlight. If you can withdraw any one of these, in theory, you have solved the problems caused by algal blooms. Research indicates, however, that reducing nutrients like phosphates and nitrates in the water column is the best way to achieve success. Phosphates and nitrates are products of the natural breakdown of organic matter and also enter the pond in the mains tap water used for top-ups and partial water changes. Unfortunately, biological filtration is not very successful in reducing these nutrients, in fact they are to an extent by-products of the biological filtration process. The common method to reduce such wastes is called chemical filtration which relies on various types of media that act as 'absorbers'. These actively trap the phosphate and nitrate in ion exchanging resins. Laguna Phos X is one of these phosphate and nitrate removing resins which is particularly effective in controlling blanket weed by reducing its source of nutrients in the water column.

Green water is particularly difficult to eradicate. Tiny microscopic, single celled algae are the cause and pea soup like conditions prevail when conditions are in their favour. If tackled early in the year biological preparations such as Laguna Algae Control are worth trying. They contain beneficial bacteria that effectively control both single celled suspended algae and other surface colonising nuisance forms by competing for vital phosphate nutrients. The bacteria become quickly established and have a longer lasting effect than chemical products. Laguna Barley Straw Pellets are also a long lasting completely natural remedy for green water. The pellets slowly release enzymes, which clear water naturally without affecting plant growth. One application will provide active enzymes over a full summer season.

To eliminate green water completely the best means though is to employ an Ultra Violet Steriliser, which can work alone or in tandem with an external filter. UV Sterilisers like those in the Laguna Power Clear range guarantee your pond water will stay crystal clear by killing the algal as the water flows past the ultra violet lamp. The strong sterilising action also takes care of parasites and harmful bacteria making the pond both clearer and safer. Power Clear Sterilisers come equipped with an 8 or 16 watt quartz-sleeved bulb and for large ponds a series of units can be installed. If you already have a UV unit, now is also the time to give the UV bulb a clean and replace any that have been in use for six months or more. Mineral salts (lime scale) can build up quite quickly on bulbs in some areas of the country and it is worth investing in a Magnetic Water Clarifier if this is the case. This is fitted up stream of the UV Steriliser and reduces the formation of lime scale enhancing the performance of the Steriliser. Magnetic Water Clarifiers also improve water quality and reduce the formation of blanket weed.

Once the chores of setting up the pond for the new season are completed it is a good time to sit back and observe all of the wildlife visitors you will be encouraging. Frogs and newts will be busy laying their eggs and birds and insects active in the marginal plants. A fish pond really is a marvelous natural resource which encourages a natural balance in the garden and forms a haven for many of the wild creatures that are becoming endangered because of the loss of similar habitats in the wild.

A PASSION FOR ANGLING

By Colin Pannell

As some of your readers are aware my son Louis and I have a passion for angling and the main species we try to catch are carp. We have spent many a day trying to catch these very elusive fish, the biggest Louis had caught was just over 20lb.

In the middle of last year we were lucky enough to win a weeks fishing in France. The lake, called La Traque, was situated in the Champagne region of France near a town called Vitry la François which is 230 miles from Calais. After a long drive we arrived at the lake and the weather was not looking good although warm it was very cloudy and looked like rain. The rods were baited and cast out and the bivvies were erected. Then the weather took a turn for the worse, with a thunderstorm. After about an hour and a half the rain stopped and the sun started to shine. This gave us time to finish setting everything up that we needed to live on the lakeside for the

The first fish 40lbs 6ozs

Fishing was decidedly slow due to the wet and cold spells that came over the area it was difficult to catch these elusive fish but they did come every so often. The next milestone was in the middle of the week and late evening when Louis struck into another big fish which after a fight of 25mins came to the net and when weighed it scaled a massive 46lbs 15ozs. This fish was a magnificent looking mirror carp. It was returned to the water none the worse for being caught.

The next fish at 46lbs 15ozs

week. Then one of Louis's bite alarms sprung into life and he quickly struck into a fish which, looking at the bend in the rod, was going to be large. After about a 20 minute fight the fish was brought to the edge and was netted carefully and placed on the unhooking mat. After wetting the weigh sling the scales were zeroed and the fish was carefully weighed and the scales went to and settled on 40lbs 6ozs. Pictures were then taken making sure the fish was looked after all the time. Needless to say Louis was over the moon with a 40lb plus mirror carp within 3hrs of setting up on the lake. More was to come during the next 7 days.

The week was a complete success for us. We both caught personal best weights. When the owner of the lake visited us, which she did on a daily basis, she said that the carp Louis had caught was the biggest to be caught in the area that year. The lake we fished was in a complex of 8 different lakes and he was lucky enough to have caught not only a lake record but also a complex record for last year.

In all we caught a total of 11 carp between us Louis caught 6 carp, 2 x 40lb, 2 x 20lb and 3 high doubles. I caught 5 carp all 20lb plus and the biggest was 28lb. A memorable experience for both of us and we are hoping to visit the lakes later this year and maybe catch some more big carp.

FISH AGES

Reprinted from AQUARIUM WORLD - the FNZAS Magazine - Aug 2004

This started me wondering . . . How old is (was) your oldest fish? Let me know your stories. - Ed.

Few reference books include one of the most common questions asked by fish owners. How long should my fish live? The answer varies greatly depending on the species of fish. However, in general smaller fish have a shorter lifespan than larger fish, and fish that lay eggs live longer than those that give birth to live young.

The two most popular species of fish, Siamese Fighting Fish, *Betta splendens*, and Goldfish, *Carassius auratus*, are at opposite ends of the spectrum. *Bettas* live little more than two years, while Goldfish live for decades.

Here is a reference with the expected lifespan of popular aquarium fish. These figures are estimates, with good care fish may live much longer.

If you cannot find your fish listed here, check the Fish Library at the address http://freshaquarium.about.com/cs/fishspecies/l/blfishlibrary.htm.

Adolfos Cory: 5 yrs
Angelfish: 10+ yrs
Apistogramma: 3- 5 yrs
Archer Fish: 5 yrs
Armoured Cat: 7-15 yrs
Bala Shark: 10 yrs
Bandit Cory: 5 yrs
Banjo Catfish: 7 -15 yrs
Banjo Catfish: 5 -8 yrs
Black Neon Tetra: 5 yrs
Blk Phantom Tetra: 5 yrs
Black Shark: 4 -10 yrs
Black Tetra: 5 yrs
Black Widow Tetra: 5 yrs
Blackfin Cory: 5+ yrs
Bleeding Heart : 5 yrs
Blindcave Fish: 5+ yrs
Bloodfin Tetra: 10+ yrs
Blue Gourami: 4 yrs
Boesman Rainbow: 5 yrs
Bronze Cory: 5 yrs
Bumble Bee Cat: 5- 8yrs
Cardinal Tetra: 4 yrs
Cherry Barb: 5 -7 yrs
Chocolate Gourami: 4 yrs
Clown Loach: 15+ yrs
Columbian Tetra: 5 yrs
Congo Tetra: 5 yrs
Convict: 10 -18 yrs
Diamond Tetra: 5 yrs
Discus 10-18 yrs
Dojo Loach: 10 yrs
Dwarf Gourami: 4 yrs
Emperor Tetra: 6 yrs
Festivum: 10+ yrs
Figure 8 Puffer: 5 yrs
Firemouth: 10 -15 yrs
Frontosa: 8- 15 yrs
Giant Danio: 5 -7 yrs
Glass Catfish: 8 yrs
Glassfish: 8 yrs
Glowlight Tetra: 5 yrs
Goldfish: 10 -30 yrs
Guppy: 3- 5 yrs
Harlequin: 6 yrs
Hatchetfish: 5 yrs
Hog Nose Brochis: 10 yrs
Honey Gourami 4 yrs
Jack Dempsey: 10- 18 yrs
Jordan's Catfish: 10+ yrs
Killifish: 1 to 2 yrs
Kissing Gourami: 5 yrs
Lemon Tetra: 5 yrs
Leopard Danio: 5- 7 yrs
Leporinus: 5+ yrs
Livingstoni: 10+ yrs
Midas Cichlid: 15+ yrs
Mollie: 4 yrs
Moonlight Gourami: 4 yrs
Neon Rainbow: 3 -4 yrs
Neon Tetra: 5- 10 yrs
Oscar: 10-18 yrs
Otocinclus: 5 yrs
Pacu: 10 yrs
Pearl Danio: 5 yrs
Pearl Gourami: 4 yrs
Pictus Catfish: 8 yrs
Piranha: 10 yrs
Platy: 3- 5 yrs
Pleco: 7 -15 yrs
Rafael Catfish: 7- 15 yrs
Rainbow Shark: 4-10 yrs
Rams: 4 yrs
Rasboras: 5- 10 yrs
Red Eye Tetra: 5 yrs
Red Rainbow: 5 yrs
Red Tailed Cat: 15 yrs
Redtail Shark: 8 yrs
Royal Pleco: 10+ yrs
Rummy-nose: 5- 10 yrs
Severum: 10- 18 yrs
Silver Dollar: 10+ yrs
Silvertip Tetra: 5 yrs
Swordtails: 3 -5 yrs
Texas Cichlid: 10+ yrs
Tiger Barb: 6 yrs
Tigerfish: 5 yrs
Tinfoil Barb: 10 yrs
Upside Down Cat: 5 yrs
Weather Loach: 10 yrs
Whiptail: 10+ yrs
WCMM: 5 -7 yrs
Zebra Cichlid: 10+ yrs
Zebra Danio: 5 yrs

FEDERATION OF BRITISH AQUATIC SOCIETIES
Founded 1938

Middlesex Tropical & Coldwater Fish Show

Show will be judged to FBAS show rules in full, including complaints procedures.

Sunday 3rd July
at the
Rose Community Centre
Hawthorne Road, Brentford, Middlesex
(FBAS Assembly Meeting Hall)
Benching commences at 8.30 am until 12.30pm

Refreshment facilities available Bacon Sandwiches and Hot Tea available at reasonable cost for the early risers. In fact, good food available all day.

AWARDS
Cards to Four Places - Fish Food as available
Best Fish in Show Trophy Championship Trophies
Trophy Classes J. Xu-w , Z

Show Organiser: Joe Nethersell
8 Acacia Avenue, Brentford, Middlesex TN8 8NR
Show Manager: Peter Furze
Tel / Fax 0208 570 0934 Email peter.furze@btopenworld.com

Show Secretary - Alan Henderson

Please Send all entries to the:
Assistant Show Secretary Adrian Dempsey
194 Greenhill Road, Herne Bay, Kent CT6 7RS.
Entry Fees 10p Late Entries subject to space available 35p
TELEPHONE ENTRIES **01227 740 747 (1900 -2130 hrs)**
E-mail entries to fbasopenshowentry@hotmail.com
Closing date for Postal Entries Friday 1st July

Show Schedules available from Adrian Dempsey or Peter Furze.

THE END OF AN ERA

By Joan Pannell

At the 2004 FBAS AGM Peter Furze, our Chairman of long-standing, stood down from his position. Peter has given us all many years of his time and devotion in this position. Not only his time to the Chairman's duties but he also represented the Federation at many shows, exhibitions and Garden Shows. His wealth of knowledge has helped many people be they aquarists or pond keepers.

He has decided to retire from the strenuous job and hand over to someone a little younger. I am sure that he will always be there to guide and assist our new Chairman when asked. Peter has taken on the job of Bulletin Editor, and we all wish him well. We can all help by providing him with articles and stories to use.

Just to say 'Thank You Mr. Chairman and hello to Mr. Editor'.

Pictured Is Peter receiving his gift and card from our President, Mr Joe Nethersell.

30 YEARS OF AQUARIAN

The FBAS would like to take this opportunity to congratulate Aquarian upon the occasion of their thirtieth year of supplying food and aquatic goods to the hobby.

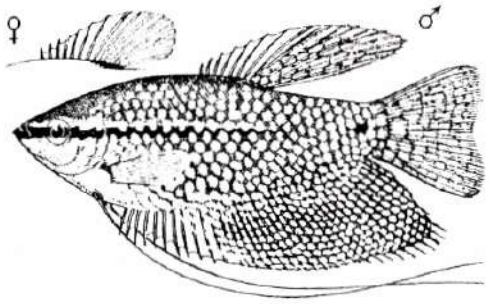
HAPPY BIRTHDAY

AQUARIAN®

For your records:
Dr Peter Burgess, Aquarian Advisory Service, has a new email address:
AquaticsDoctor@aol.com

KNOW YOUR FISH

Pearl or Lace Gourami - *Trichogaster leeri*



Common Name:	Pearl or Lace Gourami
Scientific Name:	*Trichogaster leeri*
Where found:	S.E. Asia, Malaysia, Sumatra, Borneo.
Markings:	A blue-grey fish with shining pearly spots on the body, soft rays of the dorsal fin and the caudal fin. A black stripe commences at the mouth, continues through the eye and along the flank, petering out near the caudal peduncle. Frequently a black spot is apparent at the base of the caudal fin. Males show an orange-red colouration on that area of the body below the black line when in breeding condition.
Sexual Differences:	Males show more red colouration, have longer anal and dorsal fins and a more pointed dorsal.
Breeding:	Bubble nest with the male guarding the spawn.
FBAS Show Class:	'E'

YOUR QUESTIONS ANSWERED

A new and (we hope) permanent section of the Bulletin

Can you please tell me if baby Goldfish are born black? We have some in our pond and don't know how they got there.

Yes, they are indeed black when they are young. This is quite normal and, as they get older and larger, they will begin to colour up. Some will develop the same colour as their parents, some will turn an olive green colour and will stay that colour. This is a natural reversion to the wild form, the gold colour being selectively bred over many generations. Depending on the parents, some may develop into nacreous fish which means colouration similar to what you may be familiar with as Shubunkins. The parents will eat both the eggs and the small fish so, depending on the size of your pond and how many hiding places there are in it (such as plants, rockwork etc) will depend on the survival rate of your youngsters. You will certainly have already lost a great number of them both as eggs and, later, as fry. Those that you still have, if they are large enough to see properly, are the survivors. I hope this answers your question, please do not hesitate to ask if you wish to know any more.

I am setting up a new tank. I am a complete novice at fish-keeping. No matter how many times I rinse my bogwood, it still makes the water go yellow.

Bogwood is often used to provide an alternative to rocks in furnished aquariums. Its usually dark colouration makes an excellent background against which decorative fish, such as colourful Tetras, really stand out. Always choose a piece of wood that is obviously long-dead or petrified. New branches or root materials will develop mould on their surfaces when kept underwater. Bogwood generally comes with two problems - floating and staining the water - to which there is one answer: soaking. Immersing bogwood for a long period (around 2-3 weeks at least) with several frequent changes of water along the way serves to waterlog the wood and also eventually gets rid of any tannin which otherwise stains the aquarium water. Any further staining of the water can be removed by using activated carbon in the filtration system. At one time, painting the whole piece of wood with polyurethane varnish was thought best to 'seal' the wood but this often peeled off in time. Some people advocated boiling the wood to release the staining material but this usually destroyed, or weakened, the wood's cell structure. Any tendency for the wood to float can also be cured by attaching a flat piece of slate, or stiff plastic sheet, to the underside (with plastic screws or aquarium sealant) and burying this under the substrate.

Please email your questions to: ***webmaser@fbas.co.uk*** or ***bulletin_editor@fbas.co.uk***

BRING BACK THE UNADULTERATED RICE FISH!

By Dr Peter Burgess

Among his many roles, Peter is the Aquarian® Lecturer in Aquarium Sciences and Conservation at the University of Plymouth, and Senior Consultant to the Aquarian® Advisory Service, PO Box 5059, Melton Mowbray, Leicestershire, LE14 4ZN. You can contact Peter via email: AquaticsDoctor@aol.com

The Japanese rice fish (*Oryzias latipes*) is an excellent contender for the small unheated aquarium. But sadly this little fish is nowadays extremely difficult to track down within the UK hobby. A few years ago, Japanese rice fish could be found in modest numbers in the trade, usually appearing in the shops during the spring and summer months along with various North American natives such as sunfishes, rosy red minnows, rainbow shiners and redbelly dace. I suspect that the UK Government's restrictions on imports of exotic coldwater fishes has inhibited exporters from shipping Japanese rice fishes to the UK, despite the fact that you do not need a licence to keep them.

The rice fish returns?

Elsewhere in the world the Japanese rice fish is making a comeback, but for all the wrong reasons (in my view). Along with zebra danios, the rice fish has been the subject of genetic modification experiments. This has culminated in the commercial production of "transgenic"* fish that glow in the dark. In certain countries it is possible to buy ornamental zebra danios and rice fish that emit a green, red, or yellow glow. The glowing colour is produced by fluorescent protein molecules derived from jellyfish or coral. The genes that encode for these proteins have been inserted into the fish's own genetic material (its DNA). These "man-made" glowing fish have caused quite a stir, and generated lots of controversy as to whether we should trade in genetically modified (GM) pets. As a result, some countries have banned their sale whereas others are openly trading them as ornamental novelties. As far as I am aware, glowing rice fish (and zebra danios) cannot be imported into the UK for the aquarium hobby, but some are legitimately brought in for laboratory research into molecular genetics.

Transgenic: A transgenic animal (or plant) is one that possesses genetic material from another species.

Everyone should keep them!

The reason for this article is to try and foster a renewed interest in keeping Japanese rice fish (the natural, genetically unmolested fish!). Along with the white cloud mountain minnow, the peaceful little rice fish is far better suited to small unheated aquariums than is the considerably larger (and messier) goldfish. As such, the rice fish is an ideal beginner's coldwater fish. What's more, it will readily breed in a small aquarium, revealing its fascinating reproductive habit - discussed below. (Incidentally, I am not the first to promote *Oryzias latipes* in this magazine: Dave Page of Corby AS wrote about this species a few years ago.)

Rice fish reproduction

In their native Japan, the rice fish's reproductive season is between April and October. Under aquarium conditions they will spawn when the water temperature reaches the upper 60's °F, provided there are sufficient hours of light per day (short day-lengths inhibit spawning).

Sexual differences are fairly obvious in the case of adult fish, the males having slightly elongated rays on the dorsal and anal fins and much slimmer bodies than the females. Fertilisation occurs externally but these fish are apparently also capable of internal fertilisation; this ability to switch between reproductive modes is extremely uncommon among fishes. Females may become heavily swollen with eggs, reaching almost bursting proportions, similar to that of gravid livebearers. In my experience, females may continue to extrude egg clusters even if no males are present.

The female rice fish does not scatter her eggs but instead carries them as a small cluster which hangs from her genital opening. Each cluster, resembling a tiny bunch of grapes, typically contains between 10 and 20 eggs, some of which may be seen hanging from fine opaque threads. Egg clusters are more likely to be observed in the early morning which is when external fertilisation by the males takes place. A female rice fish can produce an egg cluster every day over a number of consecutive days or even weeks. Within a few hours after fertilisation, the female will begin to attach her eggs to aquatic vegetation. This she does by slowly brushing her vent over a stem or leaf. Often several repeated brush strokes are required in order to dislodge one or more eggs. The eggs are not too difficult to spot within the aquatic vegetation, especially if observed in good light. Floating strands of fine leaved plants are ideal for egg deposition, but other forms of vegetation will also be used, especially if the plant material lies close to the water surface. The eggs, which are relatively large and tough, should be removed to rearing facilities. They can either be transferred along with the plant or gently picked off, one by one, using the fingers. Hatching takes about 10 to 14 days, depending on water temperature. Good water quality is important during the long egg incubation period, but even under hygienic conditions a small proportion of eggs succumb to fungus (perhaps some were infertile to begin with?). Next Spring (when my rice fish should commence spawning), I plan to add API's new Pimafix® anti-fungus remedy to the incubating eggs in the hope of reducing the incidence of egg fungus. The fry are easily reared on finely powdered or liquid foods and brine shrimp nauplii.

Japanese rice fish fact file:

Other common names: Medaka, Geisha-girl. The common name "rice fish" refers to the rice paddies in which these fish are found within their native Japan.

Taxonomy: *Oryzias latipes* was first described by Temminck and Schlegel in 1846. The genus *Oryzias* is now placed within the family Adrianichthyidae.

Natural distribution: Japan, China, Korea and Formosa.

Size: to about 3.5 cm

Colour: Wild forms are silvery grey. A yellow (xanthic) form is most commonly seen in the hobby; individuals vary from pale yellow to orange.

Feeding: I feed Aquarian goldfish flakes plus frozen/live brine shrimp nauplii, small daphnia, and mosquito larvae. Rice fish generally feed at the surface but will descend to lower levels in order to take a meal.

Housing: These peaceful fish fare best by themselves, in groups of six or more individuals. Provide lots of bushy surface plants for egg deposition.

Water conditions: Not fussy, provided good hygiene is maintained. Ideally neutral to slightly alkaline pH. Their wide temperature tolerance enables these fish to be kept in indoor unheated aquariums or in outdoor ponds and water features. I have kept populations of these fish outdoors year-round in the south of England, although I prefer to move them to a cool outhouse during the depths of winter. But as Dave Page has observed, they will survive under ice with seemingly no ill effects.

Other *Oryzias* species:

There are 22 described species of *Oryzias* rice fishes according to the www.fishbase.org website. Unlike *O. latipes*, these are strictly tropical species and require a heated aquarium. Those listed below were unknown or undescribed prior to the 1990's, and I suspect more await discovery:

Oryzias species	Description
O. haugiangensis	Roberts, 1998
O. hubbsi	Roberts, 1998
O. nigrimas	Kottelat, 1990
O. orthognathus	Kottelat, 1990
O. pectoralis	Roberts, 1998
O. profundicola	Kottelat, 1990
O. uwai	Roberts, 1998

Acquiring specimens:

Keeping and breeding *Oryzias latipes* is relatively straightforward, but acquiring specimens is the difficult bit! Last year I added some "new blood" to my stock, courtesy of Phil Austen who often has a few rice fish on display at the Bracklesham Festival of Fishkeeping. If you visit the Festival of Fishkeeping next year (October 2005) you may be able to acquire some rice fish for yourself (watch this magazine and the hobby press for Festival announcements). I will endeavour to bring a few specimens along too: so come and see me on the Aquarian stand!

You never know, *Oryzias latipes* might eventually make it into the top-ten's most popular coldwater fish – it certainly deserves to be there. As for the transgenic fluorescent rice fish? – well, no thanks, I'll stick to the ones that nature created...

Note: the views expressed in this article are entirely those of the author, and are not necessarily shared by his academic or commercial clients. The author would be pleased to hear from anyone who has stocks of unusual Oryzias species.

Right:

***Oryzias latipes* (female)**

Left:

***Oryzias latipes* (female) With eggs**

Right:

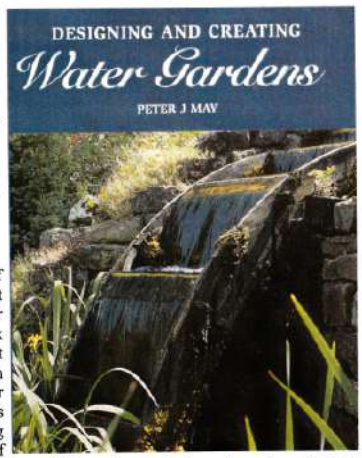
***Oryzias latipes* Egg**

NEW BOOK INFORMATION

If you are contemplating installing a pond or water feature this year, may I recommend the following publication. It is full of practical advice and step by step instructions. This book explain the basic principles to create your own water feature. Superbly illustrated with over 400 colour photographs. The book is written by a well-known and respected landscape gardener who has specialised in water gardens for the last twenty years

Designing & Creating Water Gardens by Peter J. May

ISBN 1 86126 667 7
Hardback £19.95



The book covers:
Planning a water garden.
Preparing and installing ponds and bog gardens
Moving water features
Plants & planting
Pergolas, bridges and stepping stones
Keeping fish & pond health

This is an excellent book full of great ideas and a great companion to your water gardening library. This book explains the basic principles that will empower your imagination and enable you to create your own water feature. It illustrates the vast potential of designing water into a garden It is full of practical advice, with photographs and illustrations to back up the authors thoughts and idcas.

I feel this book is money well spent by the beginner & connoisseur alike.

Peter Furze.

KNOW YOUR PLANT

Nymphaea - Water Lilly

Common Name: Water Lilly

Scientific Name: *Nymphaea*

Distribution: Both temperate and tropical regions.

Description: There is a great variation in the shape, colour and size of the flowers. Some are beautifully cup-shaped, others open horizontally like bowls while still others are star shaped with large flat petals tapering to a point. Floating leaves are characteristic of all *Nymphaeas*. The upper surface of the leaf differs very much from the underside. Water is immediately repelled from the upper side, water droplets assume a mercury-like spherical shape and run off easily whereas the underside is always wet.

Remarks: Purchase plants only in the Spring, or during the Summer months. Plants with leaves that are already formed must be placed at a depth so the leaves remain floating. Water lilies breathe through their leaves and leaves that are left submersed will drown and die. Water lilies vary in size from *Pygmaea* that has a spread of 45cm to larger varieties that can grow to over four metres.

NEW TETRATEC EX EXTERNAL FILTERS

Good filtration is essential for keeping aquarium water and, therefore, fish in good condition. Whilst internal power filters, such as the TetraTec IN *plus* range, are ideal for the majority of aquariums, for first class filtration it is well worth upgrading to an external filter. Because they sit outside the aquarium, external filters are capable of holding more filtration media and, therefore, of doing an even better job.

The new TetraTec EX range of external filters are designed to be simple to use, yet highly effective at keeping aquariums in top condition.

Simple to use design
The TetraTec EX range is very easy to use thanks to a number of simple yet effective features:

- In-built pump for quickly priming the filter system, allowing it to be started without the need for siphoning water manually from the aquarium.
- Straight-forward and easy-to-use pipework and fittings, designed to make positioning the inlet and outlet as simple as possible, and to minimise kinking of pipes.
- Cut-off system that allows you to stop the flow and remove the top of the filter for maintenance, without having to disconnect any pipework.

Effective filtration
The TetraTec EX range comes with a selection of different filter media to keep your aquarium in great condition:

- TetraTec Ceramic Rings physically remove larger solid particles, preparing the water for the rest of the filtration process.
- TetraTec Foams are designed to sieve out particles of solid waste from the water, thereby improving conditions within the aquarium and maintaining water clarity.
- TetraTec Bio Balls provide a large surface area for nitrifying bacteria, but at the same time are designed not to clog quickly. This ensures a good flow of water throughout the media, thereby delivering a constant supply of nutrients to keep the bacteria working efficiently to remove ammonia and nitrite.

- TetraTec Granulated Carbon provides a high surface area of activated carbon for the removal of organic pollutants and colours, thus keeping aquarium water crystal clear.
- TetraTec Filter Floss provides a finishing polish to the water, stripping out the smallest solid particles and ensuring that it is returned to the aquarium in top condition.

A filter for all aquariums
TetraTec EX filters are available in three sizes to meet the requirements of different aquariums:

Tetra Tec	EX 600	EX 700	EX 1200
Flow Rate (litres per hour)	627	673	1211
For Aquariums of (litres)	60 - 120l	120 - 250l	250 - 500l
Maximum Head Height (metres)	1.2m	1.5m	1.8m
Filter Capacity (litres)	5.7l	6.6l	12.0l
Power Consumption (watts)	10w	13w	24w

BRITISH OPEN FINAL 2005 & THE 2005 SUPREME FINAL TO BE HELD AT THE FESTIVAL OF FISHKEEPING 2005

The Sponsor of these two events will give to the First Place winner of each, one of these new "Tetra Tec" Ex700 External Filters

Tetra
The experts at making fishkeeping easy

MALCOLM'S LAST TALK AT ILFORD CLUB

By John Barnes.

Malcolm Goss has been giving talks to aquatic clubs for forty years. When I visited him at his home in Amersham, Bucks, he was sorting out marginal plants for his pond. After entering the warmth of his fish house I asked him the inevitable question:

What has made you give up speaking at clubs?

"Well, when I was 60 I retired from Open Show judging this used to take up many of my Sundays, being a commitment for the whole of the day. Now I am 65 it is time for me to stop the evening travelling. My car, like me, is not getting any younger. In fact, it has given up completely. I felt it was trying to tell me something so, before that happens to me, I need to spend more time with Gloria, my sons and my grandchildren. Although I enjoy meeting the enthusiasts that all clubs have, the traveling to Bristol, Corby, Southend or even Ilford are such long return trips for an evening."

What are your 'highs and lows' from your years of judging and speaking?

"Judging at the festivals of years ago was one of the highest honours. I feel that the time that I judged at the Yorkshire Festival tops everything as Yorkshire rarely invite judges from other areas. The reception given by all of the organisations was a wonderful experience. Sadly, we may never see these again. With the decline of area shows the FBAS Festival that is held yearly at Bracklesham Bay now stands alone as the best of its kind in the UK.

"My most down to earth experience was one night when I judged an interclub show in a pub landlady's front room. The Saracens Aquatic Society held the table show and it was double booked with a darts match at a Hertfordshire pub, so the fish ended up round the front room over two tables, a sideboard and across the mantle shelf.

"I do realise that many clubs have difficulty in booking speakers but very soon I hope to be teaming up with Dick Mills in making video programmes and CDs which may be purchased by the aquarist. If clubs wish to write to me I will always be pleased to contribute an article for their magazine."

As I looked around Malcolm's fish house I could well understand why he is looking forward to spending more time at home and I am sure we can all understand that.