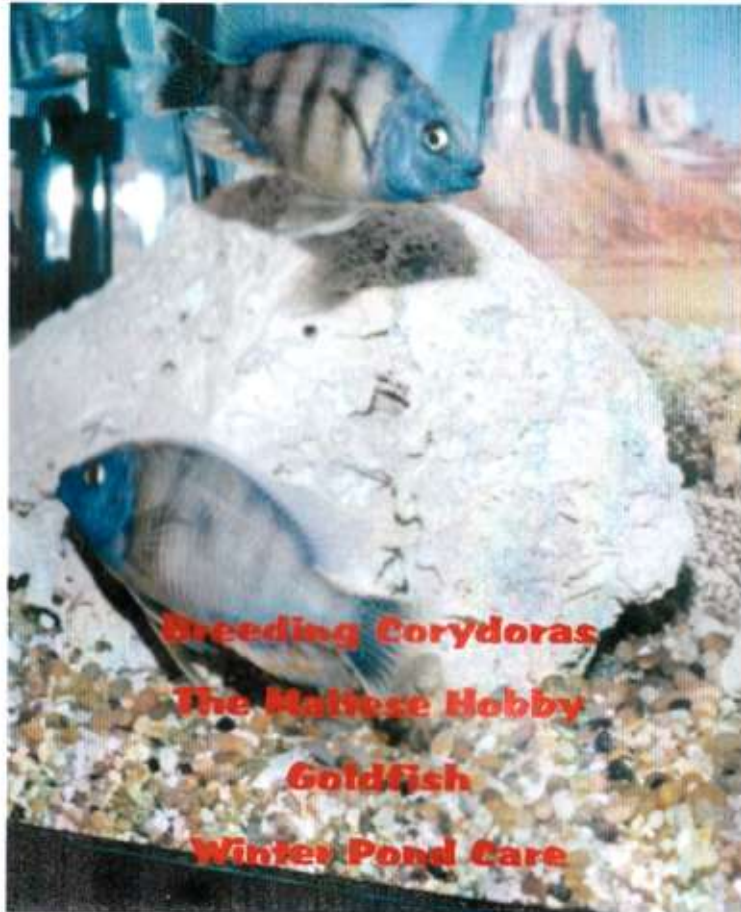


MAGAZINE[®]

AUTUMN 1998

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EDITORIAL

Dear Reader,

Now for the next issue: a page for the disabled fishkeeper. If you are disabled, write in with your hints, tips or articles on how to make life easier for people with disabilities (and the rest of us), tell us about retail outlets who have easy access or have helped you to gain access. You will also be seeing a much higher emphasis on the water gardening side of the hobby from now on.

Although the FBAS are coming to the end of their Diamond Jubilee year they still have lots of plans for making affiliation good value for money. Watch this spot for information on what is available. For all new subscribers from now onwards there will be an additional bonus. You will be provided with a special card allowing free entry to events run by the FBAS for one year. Free entry will be available to the subscriber only and is not transferable. This offer is in addition to any special promotions offered at shows.

Get those small ads. coming in. I know that lots of you breed fish and sell unwanted items within the hobby. A small ad. in "Fishworld" need only cost you £2.00 for circulation nationwide for three months. Trade ads. are not included in this scheme.

In the Summer issue we did not have up to date information. The address of the British Coldwater Association should read: Membership Secretary (Ken Hilton), 249 Longridge, Knutsford, Cheshire, WA16 8PH.

Please note: due to a lay up error pages labelled 21 and 32 should read 22 and 31. Apologies for any inconvenience, but in order to get this issue out on time it was impossible to reprint.

Sue Crew, Editor

Contributions for the next issue should be posted to me by **30th October, 1998** at the address in the FBAS Year Book (1996) or Sue Crew c/o Epoch - address below
 Federation of British Aquatic Societies 1998
 The Editor accepts no responsibility for views expressed in any article which remains the author's view.
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Cover Photo

One of the tank exhibits at "Fishworld '98"

courtesy John Pell

THE 'COMMON' GOLDFISH

by Les Pearce

There can be few other varieties of fish that are so frequently viewed with as much indifference and disdain as the humble goldfish, *Carassius auratus*. Even its familiar name, the 'Common' Goldfish, serves to belittle its stature among those who, for one reason or another, do not wish to understand this species further. For years, probably centuries, seeing small goldfish strung up in little jars and latterly, in plastic bags, was commonplace at fairs grounds. "Throw three darts at a board," or "Throw a hoop over a jar to win a goldfish," the stallholders would cry. How degrading! How many other animal species has this commonly happened to? I wonder how many goldfish lost their lives in those tiny jars and plastic bags. Indeed, how many more suffered the same fate at the hands of their new owners who, totally ignorant of their prizes' needs, promptly tipped them into a little bowl or jar and either 'fed them to death' or starved them to death.

Thankfully in recent years such practices have been outlawed. However, the inferior image and the stigma attached to the goldfish remain. Today the goldfish is considered by some to be a beginner's fish, a fish to make all your mistakes on before progressing to 'proper' fish. The reasons for this are manifest. The Common Goldfish is easily obtained, plentiful and colourful; it does not require artificially high water temperatures and will suffer and survive poor water conditions with greater resilience than most of its more illustrious cousins. It is, therefore, not only very cheap to purchase but, to the uninitiated, would seem to be very cheap to accommodate.

The life of the goldfish at the hands of the

novice is, to say the least, something of a lottery. It is true to say that some beginners in our hobby try to do things the 'right way'. They read books on the subject, ask questions and generally try to educate themselves in the requirements of their new pet. While they will undoubtedly make mistakes as they learn, they are at least trying to meet the fish's most basic needs. A fish in the care of such a person stands a more than average chance, not only of a long life, but also a comfortable one.

Not all goldfish are so lucky. Some find themselves sentenced to life in a tiny, unfiltered bowl, 100 per cent water changes every few days with little regard to the quality of the new water or as to whether it contains harmful chlorine, or perhaps, to the other extreme, no water changes at all. It is a miracle that any such unfortunate manage to survive this but, somehow, many seem to do so.

Opinion remains divided regarding the origin of the goldfish. There can be little doubt that it is very closely related to the crucian carp, *Carassius carassius*, but the question remains whether it is actually a direct descendant or just a close relative. It is certainly true that if allowed to reproduce in the wild, without the intervention of man, the goldfish will, over a few generations, revert to something very closely resembling the crucian carp. The question is, is the resulting fish the wild form of *C. auratus* or a reversion to *C. carassius*? According to the FBAS fish guide, booklet number 3, Dr Yoshiichi Matsui, aquatic author and Professor of Fish Culture at Kinki University in Japan, believes that the former is true and that the crucian carp is the ancestor of the goldfish. This publication also quotes Dr Otto Schneider's opinion that while the two species are closely related, there is a dark blotch present on the caudal peduncle of

Page 3

Page 2

the crucian carp that does not appear on the reverted form of the goldfish.

Other differences exist between the two species. The dorsal spine in the goldfish is coarsely serrated but not so in the crucian carp; the edge of the dorsal fin of the Common Goldfish is concave whereas that of the crucian carp is convex; the body of the Common Goldfish is thought by some to be more elongate than that of the crucian carp and the scale count along the lateral line is reported to be 25 to 30 in the Common Goldfish but 28 to 35 in the crucian carp, indicating a larger scale size in the Common Goldfish.

The early history of the cultivation of goldfish is equally unclear but it is generally accepted that by the time of the Sung Dynasty, around 1000 AD, goldfish were being captive bred in China. It was not, however, until around 1500 AD that goldfish first appeared in Japan and they did not find their way into Europe until the seventeenth century. The goldfish was first zoologically classified as *Cyprinus auratus* in 1758 in a book by Von Linné entitled *Systema Naturae*.

The goldfish, like all other fish, is a complex living being. Contained within the dermis (flower skin layer of the goldfish) is a substance called guanine. This is a silvery-white colour and very reflective. It is guanine which reflects light through the transparent scales of the fish to give it a shiny appearance. Generally, goldfish are placed in three separate groups dependent on the amount of guanine present and how it is dispersed within the fish. We know these groups as

Metallic, Nacreous and Matt.

In the metallic group the guanine is placed in the upper areas of the dermis, allowing good reflection of light through the scales and giving the fish the appearance of burnished metal. Nacre means mother-of-pearl so, taking things literally, a nacreous fish has a mother-of-pearl sheen to it. This is caused by the almost complete absence of the upper layer of guanine allowing the layers situated deeper beneath the dermis to show through, giving the fish its silky lustre. A matt fish has a complete lack of guanine and, as it has no reflective tissue, a totally matt appearance all over its head and body.

The colour pigments present in any goldfish are a combination of yellow and red-orange (known as lipochromes) and black (melanines). In addition to these three colours there is the red colour in the

blood (haemoglobin).

A metallic fish is usually a reddish orange or a deep chrome yellow. A lack of pigment will also cause some fish to be partially, or even completely silver. The olive-green colour found in reverted or 'uncoloured' goldfish is created by a mixture of all three pigments at various depths in the dermis.

The term 'uncoloured' is usually applied to metallic goldfish which do not develop the desired red-orange or yellow colouration, or even silver, but remain an olive-green colour for their entire lives. I feel this is a misnomer as, strictly speaking, the term 'uncoloured' implies a total lack of pigment and, as previously stated, a total lack of pigment leaves the

white of the tissue and the reflective silver of the guanine.

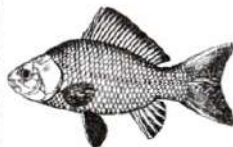
The nacreous fishes are by far the most colourful of the three groups. The colour pigments mix and overlap at different depths to produce a stunning range of colours including pink, red, yellow, blue, grey, black, violet and brown. The best fish have an underlying base colour of a beautiful blue created by the presence of melanines, or black pigment, deep within the adipose tissue, beneath the dermis. Interspersed over this blue is a mixture of some or all of the previously listed colours creating, in good examples, a stunning array of colour to compete with almost any other species of fish.

Matt fish are usually pink and do not have any iris to the eye, the eye is completely black. This is sometimes known as button eye or shoe-button eye. The pink colouration is caused by the haemoglobin in the blood and is particularly evident in the gill areas where the blood flow is concentrated to absorb oxygen from the gills.

The nacreous and matt versions of the Common Goldfish are known as the London Shubunkin. The standard for the London Shubunkin is identical to that of the Common Goldfish in every other way.

The next time you see a humble goldfish for sale at your local dealer's, don't think of it as a poor relation to your expensive tropicals at home. Consider instead the centuries of selective breeding and loving care that have gone into making it what it really is today... an attractive and challenging branch of our hobby, a real alternative for anyone looking for 'something different' to further their interest.

You might even start to compare individual specimens to the standard books and then, before you even realise it, you have 'got the bug'. You may wish to try your hand at breeding goldfish, selecting the offspring that best meet the standard you are aiming for, or you could try showing your newly acquired goldfish. You will start to find out if your interpretation of the standards matches that of the judges and you will learn what to look for and what makes one goldfish a more desirable specimen than the one next to it. The next thing you will want to do is to find out about more exotic varieties of goldfish that are available, select your favourite varieties and maybe keep some of those... but that is another subject.



Carassius auratus



Carassius carassius

Bibliography and further reading:

- FBAS Booklet no. 3 - Fish Guide
- FBAS Booklet no. 4 - Goldfish Standards
- Fancy Goldfish Culture - F.W. Orme - Spur Publications
- Goldfish (guide 3rd Edition) Dr Y. Matsui & Dr H.R. Axelrod - TTH Publications

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Page 5



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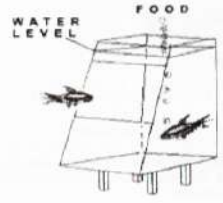
FIFTY YEARS AGO by Dick Mills Editor of 'Aquarist & Pondkeeper' Magazine

With many aquarists 'dreaming the dream', expecting to continue their hobby and get paid for it by turning it into a business, the May 1948 editorial gently poured cold water on most of these aspirations. It described quite succinctly the expectations thus:

"All one has to do is persuade an expert to pass on the cream of the experience he has gained laboriously over many years, set up aquaria at a cost of, say, £10, buy a pair of fishes at about £2, breed them, sell two hundred offspring at 10/- (50p) (to undercut the original dealer) and decide what to do with the £88 profit. In practice, things are very different. There is no substitute for personal experience, and that must be obtained the hard way. Without that experience, consistent success with fish-keeping is 'very improbable.'"

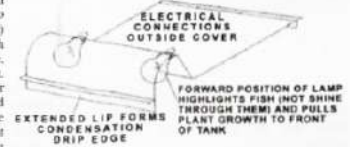
However, fish-breeding prowess was not dismissed out of hand and those that had the talent were encouraged to supply livestock to dealers who were still just beginning to emerge from the business damage of the war.

A novel alternative to a feeding ring: The box (made from Perspex) is placed in the tank so that its open top is above water level; added food is concentrated in one place, fish swim in the front opening and any uneaten food is easily syphoned out (or simply lifted out with the box). The 'legs' are optional as the box can easily be sat on the base of the tank. (Editor's note: Yes, Dick knows Emperor Tetras were



not available in 1948, but they were all he could find on his clip art!)

Here's another constructional idea for a



lamp cover which needs no condensation tray.

It must have been the start of the silly season, for there was also a novel way of destroying Diving Beetles and Water Boatmen in your pond. Using a 4' length of 3/8" metal tube as a blowpipe, you could soon - apparently - with a bit of practice become adept at blasting the 'crustiest of Dytiscus' out of the water. Yet the projectile used (rips, seed heads or peas) would soon become 'spent' within 4' of water and not harm any nearby fish!

(Editor's note: Nothing has changed much in 50 years, has it? Some of us are still 'dreaming the dream'!)



LONDON AQUARIUM (Part 2) by Sue Crew

This time we viewed the Ground and Sub-basement levels of the Aquarium.

On entering the level, glass panels in the left-hand wall allow sight of the very impressive pumping system.

The Pacific and Atlantic exhibits can be viewed from the ocean floors at this point.

The 'user friendly' exhibits come next with the 'Touch Pool' exhibits, which always seem to be busy.

There is a very interesting inverts pool which allows even the very young to see down into the water at the various exhibits.

The Beach Pool - Here there was an array of Turbot, Undulate Ray, Plince, Flatfish, Bill and other Rays.

The Ray Touch Pool - The glass sides of this pool made it easy to see these beautiful, graceful fish swimming from all angles. There were Blonde Ray, Thornback Ray, Grey Mullet, Undulate Ray and Spotted Ray.

Around the perimeter of the Ray Touch Pool walls there were some small tanks containing baby Dogfish and baby Thornback Ray. Again this exhibit was well-subscribed and it was difficult to view these young fish.

Next was the Ride the Waves exhibit, which had a wavemaker machine included and a heavy swell! You almost felt sea-sick just watching it! In this tank there were Grey Triggerfish, Grey Gurnard, Cuckoo Wrasse, Spider Crab and Tub Gurnard.

The next tank contains Goldsinny Wrasse, Lobster and Sea Scorpion.

A tank of Cuttle Fish, Snakelocks Anemone and Starfish follows.

After this there is a display of Butterfish, Shenny and invertebrates of various kinds.

Then follows a tank containing Snake Pipefish, Dusterworm, Greater Pipefish and an unidentified fish.

We then came across a rather impressive and unusual half-cylinder tank, which contains Black Sea Bream and Crawfish.

The next tank contains Beadlet Anemone and Brittlestar.

If you wish to take a break from viewing the fish there comes an opportunity at this point as there is a video screen which can be viewed by visitors.

The following tank is another unusual and stunningly lit exhibit. The lighting is purple to show off the Moon Jellyfish to perfection. The current within this tank seems to be circular, which gives the Moon Jellyfish interest.

The Coral Reef tank contains Picasso Triggerfish, Vagabond Butterflyfish, Sailfin Tang, Birdsnout, Yellow Tang, Dog-face Puffer, Long-fin Bannerfish, Batfish, Porkfish and Regal Tang. The marine enthusiast will be difficult to drag away from this area!

Purple-mouth Moray, Black Bar Soldier Fish, Panther Grouper, Spotted Moray and Green Moray inhabit the next exhibit and is followed by one containing Black-tailed Humbug Fish, Common Octopus and various invertebrates.

There are then three tanks in an alcove. The inhabitants of these tanks include Seahorses, Long-nosed Cowfish, Snake Pipefish, Copper-banded Butterflyfish, Wreck Fish, Blue Spot Boxfish, Tomato Clown Fish, Blue Damselfish, Sea Urchins, Green Chromis and Common Clownfish.

As a further diversion there are a number of illuminated maps in various locations.

A touch panel with a wide screen is housed in the wall at this point which allows the visitor to gain access to fish-related information.

The tanks then seem to come thick and fast.

Tank - Contains Red Urchin, Upside Down Jellyfish and Bloodshrimp.

Tank - Leather Coral, Blushing Coral, Button Polyps, Pulse Corals, Leather Finger Coral, Boxing Shrimp, Waving Hand Polyp, Flame Angel Fish and Organ-Pipe Coral.

Tank - Rock Hermit Crab and Horseshoe Crab.

Tank - Lake Tanganyika Cichlids

Tank - Lungfish

Tank - Butterflyfish, Congo Tetra and Peters Elephant Nose Fish.

Tank - Blue Gourami, Boesmans

Rainbow Fish and Rainbow Crabs.
Tank - Shovel Nose Catfish (couldn't see any) and Red Bellied Piranha

The next tank is waist high with clear sides and contains Butterfly Mudskippers, Archer Fish, Seals and Monos.

Tank - Pacu, Arrowana, Tiger Shovel Nose Catfish and Red Tailed Catfish. Apparently most of the fish in this exhibit have been rescued.

Tank - Freshwater Puffer, Silver Shark, Pangasius, Giant Gourami, Tinfoil Barbs and Leptobarbus loeferii.

Glass-fronted Tank - Distichodus spp, Suckermouth Catfish (Pterogoblichthys), Giraffe Nose Catfish and Tilapia.

We then went back up the stairs and out into the gift shop. The shop sells quite a lot of educational aids, books and computer software as well as the novelties that we all buy as reminders of happy days.

My overall view of the London Aquarium is that it is well worth a visit. You can easily spend a day out there if you take full advantage of all the facilities and take a little time out for lunch. The Aquarium leaflet tells you to allow at least an hour and a half to visit the displays, but I think that to take in everything and to sample the added extras like the video clips, etc. you will need considerably more time. You may need to plan your day if you want to take full advantage of the hand feeding of some of the fish.

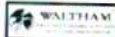
Of course, if you do have any spare time left at the end of the day, you can also sample the sights available from this central location right on the Thames.

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KAAS CONVENTION 1998

by John Edwards

The Kent Association Aquarist Societies Convention has now become an established social event in the aquarist calendar. The main aim is to provide an event that could not be staged by a single club. By so doing, K.A.A.S. can attract speakers that would not normally attend a single club because of the financial constraints, or just lack of numbers. Since its conception over ten years ago, the K.A.A.S. Convention has derived - by popular demand - a format that provides information, entertainment and a good social aspect. Our aim is to provide lectures that contain a good deal of fish husbandry and where slides are used they must be accompanied by information on the location and water conditions relating to where the fish live. To finish off the event it is always the intention of K.A.A.S. to conclude the night with an audio visual spectacular.

This year the convention was held in Smully's Hotel in Margate, not in the centre of Kent as you may think, but Margate still has a good selection of hotels. This year's Convention was generously sponsored by the Federation of British Aquatic Societies and because of this K.A.A.S. was once again able to maintain the ticket price at £10.

The 1998 Convention was opened by their Chairman, John Edwards, who thanked all those involved for their time and effort. He then went on to introduce the first speaker, Roger Froggit from

Tetra. Roger started his lecture by reminding all those present of the fundamentals of good fish-keeping, water quality, correct feeding and stocking levels. He then went on to explain the importance of spotting sick and injured fish and their treatment before infection becomes established. Roger also highlighted the importance of finding out what the local water authority is putting in the water.

The second guest speaker was the famous fish-keeper from Barton Scragrave, Dave McAllister, whose subject was collecting Swordtails in Mexico. Now don't fall into the trap of all those who thought the subject a bit limited, because there are in



fact, fifteen Xiphophorus species and not just the one sold in your local shop. As Dave proceeded to explain whereabouts in Mexico these fish originated from, no further explanation was needed as to why we had not seen them regularly in retail outlets. He explained that some species were only found in small streams far off the road (if, indeed, there was a road at all). To assist him in returning to these streams, Dave took with him a satellite navigation device, so not only did he show

Page 11

in, the water make up and temperature, but also the latitude and longitude references.

This year the audio visual spectacular was produced by the talented husband and wife team, Mike and Gina Sandford. First of all we were treated to a spectacular slide show depicting the wood at Reigate



Hill before and after the great hurricane of 1987. The slides were accompanied by some excellent music and portrayed the vibrant life of the wood before that tragic event and the utter devastation left in its wake. After we had wiped away the tears, we were treated to a superb slide show of magnificent catfish (also accompanied by some great music). Mike and Gina are well-known for their expertise in keeping catfish, so after their show, they were able to answer questions on the care of catfish.

During the evening, K.A.A.S. also held their quiz final. The winning team was Invicta A.S., in their first year with K.A.A.S. Also during the evening a fish auction was held with some very nice fish on offer.

THANKS...

Erith and District AS would like to thank everyone who attended their 1998 Open Show and helped to make it a success. We hope that you all had an enjoyable day and a successful one. We look forward to seeing you all soon and hope that you will all be at our 1999 Open Show.

Page 12

We should also like to thank all the members of the Isle of Wight AS for a splendid weekend at "Groxkermania" and we look forward to another great weekend next year.

Once again our thanks to you all.

M. Blackie,

Chairman, EDAS

TERRY ASQUITH

It is with deep regret that Erith & District AS have to advise you of the death of Terry Asquith after a long struggle against illness.

His death is a great loss to his wife Jean, daughter Jeannie and son John, as well as to our Club and the fishkeeping hobby in general.

The hobby that Terry loved so much will not lose the name "Asquith", however, as his daughter, Jeannie has now joined EDAS and hopes to carry on where Terry left off and keep up the family tradition.

Our thoughts are with his family at this sad time.

MORE THANKS...

Dear Adrian,

I am writing to thank and congratulate you, on behalf of the FBAS, for the wonderful pond display featuring Laguna, which you all organised at the Gardeners' World Exhibition.

I know, only too well, from personal experience, that anything worth doing, is worth doing well. As far as exhibitions and shows are concerned, I must have over 20 years experience under my belt in

DR. FORD'S TOP TIPS FOR FISHKEEPERS

by Dr. David Ford

Coldwater Tip - Even coldwater fish need some tank heating in winter, especially if sited in an external fish house. The traditional heater/stats are set too high, so use a much lower wattage heater than recommended for the aquarium size, or get a home brewer's heater/stat.

Coldwater Tip - If your pet Goldfish is kept in a bowl that's always getting dirty, do not throw all the water away. Pour off the top clear water and save it (with the fish). Clean up the bowl and gravel (if you have it) and slowly top up with clean water so that the blend of old and new is about 50:50. This prevents the chemical shock to the Goldfish that all raw new water would cause.

Tropical Tip - Some of the larger tropical fish will lie against a heater and get burnt. Other large fish may attack the heater or attempt to move it around just for fun. For these, the heater is best hidden within a plastic pipe such as the DIY plumber's Polypipe. Drill holes to ensure adequate water flow over the heater. For the 'lumiture removers', silicone the pipe in place first.

Marine Tip - Use plastic (such as nylon) nuts and bolts from the DIY store for all marine tank fittings. This prevents rust forming from saltwater acting on any

metal nuts and fittings. If you own accessories such as autofeeder, remove the metal screws and take them to the store for a plastic equivalent.

Pond Tip - Need an emergency aquarium for your pond fish? Use a baby bath, but cover it with mesh netting to prevent the fish leaping out. An easily stored emergency pond is an inflatable children's paddling pool. For a real emergency, use a plastic sheet draped inside a strong cardboard box.

Plant Tip - Most fishkeepers decorate their tanks with either artificial or natural aquatic plants. In fact, they may be mixed, which can help with the finances besides looking realistic. If the real plants give a very green background, some red, brown or yellow artificial plants can add a splash of colour.

Tank Tip - If you prefer a printed background on your tank, the traditional fixing method is to use adhesive tape, which can be unsightly and does not allow easy removal. A better system is the velcro available from sewing machine shops. Fix the velcro to the tank using double sided tape and do the same with the backdrop. You can now change your backdrop easily and cleanly!

Tank Tip - Traditional plastic tanks often get scratches on the surface which reduces transparency. Providing the scratches are not too deep, they can be polished away with metal polish. Remove the fish and water first and rinse thoroughly!

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many countries around Europe. I only tell you this to say that when I am truly impressed, then it has to be something really exceptional. Let me ask you to thank all the members of the FBAS for producing such a truly superb pond display. Eulogies and clichés can roll glibly off the tongue, but I think it suffices to say the overall display looked as if it had been in existence for many months, if not years! I just hope that you do not feel under enormous pressure next year, to try and match this display, never mind surpass it.

I look forward to meeting with you all again at Weston, by which time you should have recovered from this mammoth effort.

Thank you, once again, from everyone at Hagen.

Yours sincerely,

Andrew Bartyla,

Managing Director

PLYMOUTH HO!

Peter Cairn and Vic Higgs (Hounslow AS)

On Wednesday, 6th May, 1998 at 0645 we arrived at Dick Mill's house to collect him at the start of a day out to the opening of the new marine aquarium in Plymouth.

We managed a good journey without too many road works and were lucky enough to miss the heavy morning rush-hour traffic.

The weather was not too kind to us as it was overcast and wet. I was breaking totally new ground as I had never before visited this part of England.

On our way to the Aquarium we paid a surprise visit to Joyce and Bill Rundle. I

only wish I could have photographed their faces when we turned up on their doorstep!

It was quite easy to find the Aquarium as it is a new building on the edge of Plymouth Harbour. It contains all sea fish, starting in the estuary on to the tidal beach and out to sea. We saw lovely Cod and Plaice, but no chips! There were also tropical marine exhibits, too. Our tour finished at the very impressive Shark Tank.

We found the Aquarium to be very clean, but that is probably because it is all so new. In a year or so's time the exhibits will have matured more.

At the end of the tour around the exhibits you have to go through the inevitable gift shop with a variety of souvenirs available for purchase.

The staff in the Aquarium were very helpful and recommended that we visit a nearby fish and chip shop for our (late) lunch. We had never tasted fish and chips like it and only £3.95 a head!



This part of the town was a bit odd. The shops we managed to see were a delight. Plymouth itself is very hilly - not a place for retirement - with old and new buildings mixed in the same area.

We left Plymouth earlier than we had originally planned as we had decided to drop in to see Linda Lewis in Exeter. We arrived at 1530 and stopped about 30 minutes for a 'natter' over tea. Linda recommended a fish shop to us, but typically it was closed.

We made our way back to the M5, waved to Weston-Super-Mare at Junction 21 and once again beat the rush-hour traffic arriving at Dick's again at about 1915.

All in all a long, but superb day!

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The new



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aquarian

WALTHAM'S experts are often asked for advice on feeding and care of fish.

We include a selection of your questions here.

Dear Dr. Ford,

I am completely new to tropical fish and I have a 30" x 12" x 15" tank using a Fluval 3 filter. I would like a small fish or two that will help to clear the algae. What do you suggest?

The Bristlenose catfishes are the best algae-eaters ... but other ideas are better.

All algae, whether red, blue-green, brown or black, photosynthesises, so turning off the lights will cause algae to fade away (remember to remove dead and dying algae or it will pollute the water). Plastic plants are needed of course, any real plants should be removed to another tank.

An alternative is to use coloured lights (since photosynthesis requires white - i.e. full spectrum - light). I have stopped blue-green algae with red and green lights (coloured fluorescents or simply using red etc. cellophane as a light filter).

Over marine tanks I have used coloured dichroic spot lights - one red, one green (orange and yellow look good, too, but blue is usually too dull) - shining through a glass top. The bleached coral remains white for many months and the air bubbles of the pump picks up the colours giving a pretty scene.

Another idea is to use water soaked over hay or barley straw as there is some

extract - not yet identified - that suppresses algal growth without harming the fish. Koi keepers use this system routinely these days and Lily growers always add a sprig of hay to the growing ponds. Worth a try if coloured lights are not possible!

Yet another method is to stuff the tank with well-growing aquatic plants so the algae cannot compete ... the roots need to be in loam (not peat) in minipots. Add floating plants, too.

Even another idea is to check the pH as green and blue-green algae usually grow in alkaline, hard water, so alter the aquarium chemistry (slowly) with rain water soaked over peat for acidity and softness. You do not see algae in the upper Amazon ...

I am about to set up a new fish system either for Discus or tropical freshwater (mixed), as I used to keep marines in the past and I have some surplus coral rock, coral and lava rock. My question is: Could I use any of this in either set up? I would also like to put in the bottom of the tank coral sand or any other sand as I am not a lover of gravel.

Coral rock and sand will dissolve small amounts of Calcium salts in neutral freshwater, and will react with acid waters to dissolve quite large amounts, altering both the pH and the hardness

values. This reaction does not occur in saltwater.

Hence you cannot use Coral in freshwater set-ups, certainly not in a Discus tank since these fish are only happy in soft, acidic waters. The only freshwater set-up that would accept Corals is the hard, alkaline waters for Rift Valley Cichlids.

Since you do not like gravel, the best base to use is the inert Silica Sand sold for children ... the Play Sand from the Early Learning Centre is only £1.99 for 10 kilos. Just make sure you rinse it well before you use it.

I am writing to ask you if you would please give me full information on One-lined Yellow Pencilfish (Nannostomus unifasciatus). Are they suitable for a community tank? I have tried to find information on these fish in several books in the Library, but without avail!

Nannostomus unifasciatus does not exist, that is why you cannot find it in the books. When Pencilfish were named, they were called Poecilibrycon spp. but more detailed study divided the Pencils into Nannobrycon and Nannostomus (back in 1977). The Single Line was placed in Nannobrycon as unifasciatus and the Two-lined as Nannostomus (bifasciatus). There is also a Three-lined Nannostomus trifasciatus.

Nannobrycon unifasciatus is a typical Pencilfish, ideal for the tropical community tank. It originates from the Upper Amazon, where it feeds on small insects. The fish is schooling (so buy several) and will take (flake foods and Brine Shrimp).

The fish will group spawn in soft, acidic waters in dark conditions. They are egg-eaters so marbles are needed to trap the eggs.

Please can you give me some advice on the best way to clean my plastic plants in my aquarium as it is a very slow process when I am cleaning my tank out.

The easy way of cleaning plastic plants is to immerse them in diluted (a cupful to half a bucket of water) household bleach for a few hours. Rinse them very well as the chlorine is deadly to fish and then re-use them.

I have two sets of plastic plants - one set in use and one soaking in a bucket of bleach (weighted down by a rock or two) in the garden, which avoids the chlorine smell in the house. You need to be careful of wildlife and pets and cover the bucket. When the plants look dowdy or become green with algae, the sets are exchanged.

Do not scrape the plastic plants clean because this causes tiny scratches in which the algae gains a quick hold and the plants look dirty within a few days. Using the bleaching method, the plastic stays shiny and clean-looking for weeks.

I am writing to enquire if you manufacture an aquarium cable tidy or power centre.

I am interested in one with several switches, which would allow different pieces of equipment to be switched off individually.

Thank you for your letter. I am sorry but we no longer make any equipment for aquaria - only foods.

Firms such as Interpet Ltd. and Hagen Ltd. do make Cable Tides and these are available at aquarium shops or water garden centres. I note that DIY stores such as B & Q sell minisockets with four or five miniplugs that would work, too.

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Two recent additions to the world's largest range of aquatic books.



For further information or to receive your free copy of our title list contact:
TFH Publications, The Spinney, Parlands, Forest Road, Waterlooville, PO7 6AR
 Tel: 01703 268122 Fax 01705 268801

I use standard domestic sockets and plugs hidden inside a cabinet under the aquarium, but be sure not to get these wet! These are bulky but do have individual switches and also allow me to fit a timer for lights, separate to the heaterstat and airpump, etc.

I am writing to you to ask for some ideas on giving my tropical fish tank a facelift.

I'm sure there are lots of different things I could do, but I shall leave it in your hands!

Tank decoration is very much a personal thing - providing the water quality is good the fish do not mind whether the aquascene is an Amazonian stream or a plastic city with mermaids.

Showers and breeders insist on purity in aquascaping, with only plants found in the natural home of the chosen fish. Rocks are water-worn and placed in geological patterns. The base is sand, honey, silver or black, and any equipment is carefully camouflaged or hidden from view completely.

American aquarists enjoy technology - their aquatic equipment is in fluorescent plastic with lots of flashing lights and digital readouts. Tanks are shaped acrylic with artificial backdrops ranging from alien scenes to fibre optic lit skyscraper scenes. Having set up all this equipment, fish have to be bought to justify its use! Whereas, British breeders have bare mini-tanks with paraffin stove heated fish-houses, because they only have eyes for the fish themselves.

To decide what kind of aquarist you are, visit any national fish show (see society pages in the monthly aquamagazines or the back of "Fishworld"). There is always a furnished aquaria section and some of

these displays are stunningly beautiful. Many are poludariums (combined land and water plants, like a slice of river bank) rather than aquaria.

Fun aquaria can include air-operated mobile ornaments, plastic or pot ornaments from mermaids to skulls. The aquatic stores and garden centres carry a wide range of these. Plastic plants can be realistic or brilliantly coloured floral displays that would never occur in nature!

Most large aquarium books have introductory pages with descriptions of how to site rocks and centre-piece plants to give pleasing symmetry. Browse these at your local aquastore or library. If you want to own one, a good choice is "The Complete Aquarium" by Peter Scott, Dering Kindersley (1991) ISBN 0-86318-603-3 because it lists a dozen different aquaria, from the Amazonian Rain Forest stream to a British rock pool.

As long as your decor is not water soluble, you can design whatever aquascene you wish... the fun is in the designing and building.

"Dear Dr. Ford..."

You can send your questions to him at the address below and the most frequently asked or the most interesting ones will be published on these pages.

Aquarian Advisory Service,
 Waltham Aquacentre,
 PO Box 5059,
 Melton Mowbray,
 LE14 4ZN

or EMail:
 aquarian@compuserve.com

CORYDORAS AENEUS (ALBINO)

COMMON NAME: Albino Cory
 by Roger Crew

AGE WHEN BRED:

18 months - 2 years. Female 75%, Male 50% of full size.

CONDITIONING FOOD:

Frozen bloodworm, Aquarian Tropical Flake, JMC Catfish Pellets, 3-day-old Brine Shrimp Nauplii

TIMESPAN TO CONDITION FISH:
 6 months

SPAWNING ATTEMPTS:

It took three attempts to get the adults to actually spawn

SPAWNING TANK:

48" X 15" X 12" - Undergravel filter driven by power head.

WATER CONDITIONS:

pH 6.8, GH 10, Temp. 78F. Old water, but spawning triggered by 25% water change with cold rainwater.

BREEDING MEDIUM:

Tank furnished with Java Moss and Twisted Vallis. Eggs laid on sides of tank and around power head spout.

FRY HATCHING PERIOD:
 2 days.

NUMBER OF EGGS:
 1st spawning = 50 eggs

FRY:

Eggs were treated with a heavy solution of Methylene Blue and moved to a 6" X 4" X 4" with old water to raise.

FRY RAISING:

First 7 days - Liquify Egglayer. Introduced 3-day-old Brine Shrimp Nauplii at day 3 with Aquarian Fry Food. Adult foods introduced as soon as fry largest enough to ingest. These included the conditioning foods listed above plus Promin fine granules. Water changes carried out every other day to promote growth for first few weeks of life.

OTHER INFORMATION:

It has been noted by the breeder that the albino variety of C. Aeneus show a higher mortality rate and a much slower growth rate.

FOR SALE

Tank bred Prickly Seahorses (Hippocampus crispus) £12.00 each. Also Diamond Scale & Gold Veiltail Angel Fish £1.50. All excellent quality/health. Nigel Whitem 01202-533506 (Bournemouth area)

FOR SALE

Small ads now accepted by the Editor. The cost is £2.00 for up to 20 words incl. contact address/number and 10p per word for each additional word. Ensure cheque and telephone number enclosed with ad.



The Lady Mayoress of Dunstable was kind enough to pick two pictures as her favourites. They are Natasha McConnell's aged 9 from Northern Ireland (top picture) and Rachael Turner's aged 11 from Coventry (bottom picture).



BEST WATER PLANTS

Stefan Buczacki

ISBN 0-600-58337-6 Price £4.99

Reviewed by Sue Crew

This is a super book for the beginner and enthusiast alike. It covers all aspects of water-loving plants and has sections on:

Marginals

Water Plants

Submerged Plants

Floating Plants

Bog Plants

Ferns

Grasses

Bog Garden Trees and Shrubs

The title of the book is something of a misnomer as it also includes chapters on:

Water as a Garden Feature

Creating a Water Garden

Types of Water Garden Plant

Planting, Feeding and Aftercare

Propagation

Other Pool Life

Problems

In fact, almost everything you would want to know about water gardening at a very reasonable price.

If you are looking to set up a water feature you will be inspired by the ideas in this book and can gain much practical information on how to implement your plans. You are told how to build a pool with preformed liners and flexible liners, a bog garden, a raised pond and the use of lighting and water movement.

There are 118 pages all in colour with a common layout, which is exceptionally "readable". The reader is told both scientific and common names of all



plants, what the flowers are like if it is a flowering variety, what the foliage is like, its preferred environment, any special requirements, hardiness, size, planting advice, care, propagation, associated problems

and any similar species. Each reference is accompanied with a high quality photograph of the plant (usually in flower if appropriate). Six pages are devoted solely to Water Lilies with recommended varieties and photographs of fifteen varieties.

All of the more common species are included in the book and some not so common species.

The index is 'user friendly' in that it uses both common and scientific names.

Having sold water plants and marginals on the FBAS stands at shows such as Hampton Court, this is certainly a book that I will be investing in and one that I will be recommending to others at such shows.

This book is one of the "Amateur Gardening" series of books. Other titles include "Best Shade Plants", "Best Climbers", "Best Soft Fruit", "Best Foliage Shrubs" and "Best Herbs".

Stefan Buczacki will be known to most of you via his appearances as a TV presenter of horticultural programmes. His easy TV style comes across well in this book.

If you are looking for a reasonably priced stocking filler for Dad (or Mum) for Christmas, either ask your local bookseller for this book or track it down in one of your local garden centres. It is certainly good value for money.

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Welcome to the NJFA section of "Fishworld". This quarter we're concentrating, primarily, on the shows. A number of Open Shows have taken place, some of which had Junior Classes with quite a few of you participating. It would, of course, be nice if we could build on this beginning, with more Clubs including Junior Classes in their shows. This, I am sure, would encourage more of you to bring your fish out to compete.

We're giving "Fishing for Words" a break this quarter in order to fit everything in, however, look out for the repeat of the great Tetra Junior Aquaquiz, which is again included as a flier with your mail drop. Also check out the pictures of some of the best entries in the Tetra/NJFA Painting Competition, displayed at "Fishworld '98" at Dunstable.

Our usual request at this stage of the section, is that whilst we hope you enjoy reading the various items we are able to

fit into your Section, we hope to hear from more of you about anything remotely fishy!

Here are some of the results from around the Open Shows, starting with Swindon, which was held on 26th April, 1998:

B.y-M.y (Tropical Egglayers)

- 1st Robert O'Grady (Swansea)
- 2nd Zoe Price (Aberdare)
- 3rd William Dunn (Swindon)
- 4th Heather Davies (Mountain Ash)

O.y-T.y (Tropical Livebearers)

- 1st William Dunn (Swindon)
- 2nd Robert O'Grady (Swansea)
- 3rd Robert O'Grady (Swansea)
- 4th Robert O'Grady (Swansea)

U.y-W.y (Coldwater)

- 1st William Dunn (Swindon)
- 2nd Robert O'Grady (Swansea)
- 3rd Robert O'Grady (Swansea)

Robert O'Grady's *Otocinclus vestitus* was the Best Fish in Junior Classes

Corby held their Open Show on 10th May, 1998, with the following results:

B.y-M.y (Tropical Egglayers)

- 1st Samantha Doswell (Corby)
- 2nd Robert O'Grady (Swansea)
- 3rd Ashley Doswell (Corby)
- 4th Mick Mathews (Leicester)

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O.y-T.Y (Tropical Livebearers)

- 1st Robert O'Grady (Swansea)
- 2nd Robert O'Grady (Swansea)
- 3rd Andrew Ward (Corby)
- 4th Robert O'Grady (Swansea)

U.y-W.y (Coldwater)

- 1st Robert O'Grady (Swansea)

Robert O'Grady's *Cyprinella lutrensis* was the Best Fish in Junior Classes

The Isle of Wight held their Open Show on 17th May, 1998, with the following results:

B.y-M.y (Tropical Egglayers)

- 1st Tom Whiddett (Mid Sussex)
- 2nd Gary Jones (IOW)
- 3rd Nichole Whiddett (Mid Sussex)
- 4th Gary Jones (IOW)

O.y-T.y (Tropical Livebearers)

- 1st Tom Whiddett (Mid Sussex)

U.y-W.y (Coldwater)

- 1st Matthew Pakes (IOW)
- 2nd Matthew Pakes (IOW)

Tom Whiddett's *Sturasonia panamense* was the Best Fish in Junior Classes

Bracknell held their Open Show on 14th June, 1998, with the following results:

B.y-M.y (Tropical Egglayers)

- 1st Jamie Mathews (Leicester)
- 2nd Ben Hogg (Bracknell)
- 3rd Ben Hogg (Bracknell)
- 4th Ben Hogg (Bracknell)

O.y-T.y (Tropical Livebearers)

- 1st Kristie Barnes (Bracknell)
- 2nd Ben Hogg (Bracknell)

U.y-W.y (Coldwater)

- 1st Kristie Barnes (Bracknell)

Jamie Mathews' *P. nicholsi* was the Best Fish in Junior Classes. Also a mention for J. Tizzard (Selsey) who entered a Three-spot Gourami in class B.y-M.y, but was unfortunately not to get a card.

A big THANK YOU to all of the judges and well done to all of you who entered. We can now confirm that all card winners will receive - in the not too distant future - our new National Junior Fishkeeper's Association Certificates for placings and Diplomas for Best Fish in Junior Classes. Samples of both of these awards can be seen on page 28.

"FISHWORLD '98" was held at the Queensway Halls, Dunstable in May of this year. The two-day Show and Exhibition was, as ever, well supported by the NJFA's sponsors. If you were not lucky enough to visit "Fishworld '98" you

may be interested to see some of the photographs taken there (pages 29-30).

There was a prominent display of some of the entries in the Tetra/NJFA Painting Competition. Part of the display can be seen on page 30.

The Lady Mayoress of Dunstable was kind enough to pick two pictures as her favourites from the many on display. These were the entries by Natasha McConnell from Northern Ireland and Rachael Turner from Coventry. These two young ladies will receive prizes from the sponsors of the competition, Tetra. Both Natasha's and Rachael's pictures can be seen on page 31.

Since "Fishworld '98" there have been lots more entries making their way through the post to us, so we will have a much larger selection on display at the Federation of British Aquatic Societies "Supreme Festival of Fishkeeping" at Weston-Super-Mare.

On the Sunday of "Fishworld '98" there was the culmination of all the fish shows, including your NJFA Show. The results from this are as follows:

C.y

- 1st Robert O'Grady
- 2nd Ashley Doswell
- 3rd Samantha Doswell

E.y-F.y

- 1st Jamie & Mick Mathews
- 2nd Robert O'Grady
- 3rd Samantha Doswell
- 4th Robert O'Grady

G.y

- 1st Angela Cank
- 2nd Robert O'Grady
- 3rd Ian Cank
- 4th Robert O'Grady

H.y

- 1st Samantha Doswell
- 2nd Angela Cank
- 3rd Jamie & Mick Mathews

J.y-K.y

- 1st Angela Cank
- 2nd Ian Cank
- 3rd Ian Cank
- 4th Angela Cank

L.y-M.y

- 1st Angela Cank
- 2nd Ian Cank
- 3rd Jamie & Mick Mathews
- 4th Ashley Doswell

N.B.y-W.y

- 1st Gary Edwards
- 2nd Aniket Sardana
- 3rd Robert O'Grady

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O.y-Py

- 1st Ben Hogg
- 2nd Angela Cank
- 3rd Ian Cank
- 4th Andrew Ward

Q.y-R.y

- 1st Angela Cank
- 2nd Robert O'Grady
- 3rd Robert O'Grady
- 4th Robert O'Grady

S.y-T.y

- 1st Angela Cank
- 2nd Angela Cank
- 3rd Angela Cank
- 4th Andrew Ward

U.y-V.y

- 1st Angela Cank
- 2nd Ian Cank
- 3rd Angela Cank
- 4th Ian Cank

W.y

- 1st Robert O'Grady
- 2nd Robert O'Grady

With her first place in J.y-K.y (Rasbora hengeli - see right), Angela Cank was the recipient of the Best Fish in Junior Show award. This time she edged out Robert O'Grady and was also awarded Highest Pointed Junior. Many congratulations to Angela and to all those

who took part in the NJFA Fish Show Junior Fishkeepers, Parents and Guardians, Senior Judge David Page and Judges Chris Bramble and Les Pearce, all helpers and, of course, our sponsors Messrs. Rolf C. Hagen for the prizes and Messrs. Bullseye Trophy Centres for the trophies.

As we reported in the last quarter's edition of your Junior Section of "Fishworld" magazine, Robert O'Grady from Swansea has distinguished himself by becoming the first Junior Fishkeeper in a long time, to achieve the Federation of British Aquatic Societies Bronze Award.

Robert has been keeping fish for two years, although he has become more involved over the last year. His first show was the Federation of British Aquatic Societies "Supreme Festival of Fishkeeping" weekend at Weston-Super-Mare in 1996. Robert has a 3' community tank in his bedroom, where Platies, Tetras, Danios and small Catfish can be found. He and his Dad share a species tank of *Cyprinella lutrensis* (Red Shiners). Occasionally Robert takes his Cichlids to shows, which he keeps in his



Angela Cank's *Rasbora hengeli*

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Dad's 8' tank. Finally his *Betta splendens* share a tank with his Dad's *Synodontis angelicus*.

The day before fish shows, Robert can be found cleaning out show tanks and catching his fish. We are reliably informed, however, that he did once flood the kitchen doing a water change, so a watchful eye is kept now, just in case it happens again! (It happens to all of us at one time or another, Robert, but that's another story...) With his recent successes, Robert is hoping that a Best Fish in Show award might be just around the next show corner.

Well done, Robert. Keep up the excellent fishkeeping. We also happen to know that one of the entries on display in the Tetra/NJFA Painting Competition at "Fishworld '98" belonged to Robert.

A photograph of Robert receiving his awards can be seen on page 22.

Another of our Junior Fishkeeper's has also been distinguishing herself lately, in more ways than one!

Angela Cank's interest in showing fish developed from an Oldham AS Open Show in 1994. Her Mum and Dad had taken her along and that was it. The show bug had bitten! A donation of a 2' tank from her Dad was set up a couple of days later, in her bedroom. The tank came complete with mature water and filter from one of her Dad's tanks. A trip to some aquatic shops, where her Mum and Dad let Angela pick out the fish she liked,

soon presented a blue Platy which she wanted to show. So, after some 'encouragement', the family joined Halton AS, where Angela's Gran and Grandad were already members.

It just so happened that the Club's Open Show took place a couple of weeks later and - where have I heard this story before - since Angela was determined to show, her Dad decided he was going to have a go as well. All of us - young and old - will remember that first show waiting for the results and the rush of excitement as you, like Angela, saw that your 'pride and joy' had managed 'against all odds' to get a card. Improving results over the next few weeks culminated in Angela's blue Platy attaining a third Best in Show at Darwen AS, which qualified it for the Champion of Champions at the British Aquarist's Festival. Angela's Platy did not achieve a place, but there was now next season to look forward to.

A need for a larger tank was foreseen. Angela had her eyes on a 6' tank like her Dad's, but a 4' was settled on. This soon became full of fish and a breeding programme seemed to be the way to go, so another 4' tank was added under the first. This was sub-divided into four and soon showed the results of care and attention with young *Bristlenose* Catfish, *Platies*, *Guppies* and *Swordtails*. This also became a source of income to invest in more fish.

Some four years later, Angela still has her two 4' tanks, although the second is no longer sub-divided, as she uses both of them for growing her fish on. Her efforts are currently concentrated on *Rasbora hengeli*, *Rasbora heteromorpha*, *Platies*, *Ameca splendens*, *Corydoras gossesi* and

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Corydoras panda. Angela also keeps three *Farlowella acus*, various other livebearers and another huge blue Platy.

Angela switches on her tank lights at 8am on her way to school. Her tank lights are fitted with Grolux bulbs and have Fluval 203 filters. Every two weeks Angela ensures she carries out a 10 gallon water change on each tank. Angela tells me that the fish are in excellent condition and the plants grow very quickly.

With the awards that Angela's fish have achieved - particularly Best Fish in Show on a number of occasions at Junior Shows

- we can well believe that her fish are in good condition. Well done, Angela. Keep up the excellent fishkeeping.

A photograph of Angela receiving her "Fishworld '98" awards can be seen on page 22.

Before closing for this quarter, we at the NJFA would like to take this opportunity to remember that some of you will be changing class at school, transferring schools as a result of moving house, whilst others like Thomas Loake will be going to senior schools to start a whole new period of your life. Whatever you are doing, we wish all Junior Fishkeepers well for the start of this school year.



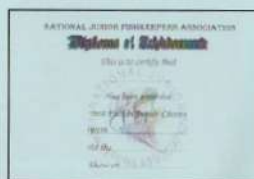
ABOVE & BELOW
Part of the display of paintings at "Fishworld '98"



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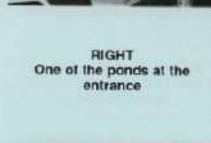
ABOVE & BELOW
Certificate for placings and Diploma for Best Fish in Junior Classes



"FISHWORLD '98"



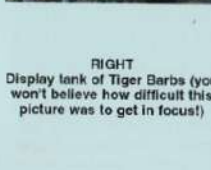
LEFT
A magnificent display of bonsai, from the local Club in the entrance way



RIGHT
One of the ponds at the entrance



LEFT
Gouramis in a very realistic setting - one of the display tanks



RIGHT
Display tank of Tiger Barbs (you won't believe how difficult this picture was to get in focus!)



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LEFT
Trichogaster trichopterus (gold)
Winner of Class E.y-F.y owned by
Jamie & Mick Mathews

RIGHT
Botia sidhimunki
Winner of Class L.y-M.y owned by
Angela Cank



LEFT
Hemichromis bimaculatus
Winners of Class N.B.y-W.y owned
by Gary Edwards

RIGHT
Poecilia reticulata
Winner of Class O.y-P.y owned by
Ben Hogg



Life with 'Goldie' by Alex



Goldie you won't believe this -
they say we've got short memories

Who says that?

Who says what?



**THE MALTESE
HOBBY**

by Dr. Peter Burgess
Aquarian Advisory
Service

Peter visited Malta in June this year (1998) during a short business trip. He found time to investigate the fishkeeping hobby on this Mediterranean island.

Malta remains ever popular as a tourist attraction, particularly among the British. Package holidays can be very good value (especially if you shop around for bargains) and it is only about three hours flight away. Malta is simply a pleasant place to relax by the sea, maybe swim or scuba dive and the warm evenings are perfect for strolling along the promenade, perhaps ending the day with a drink at one of the many welcoming back-street bars. Being an island nation the sea - and of course its fish - play an important part in Maltese culture, but what about the fishkeeping hobby?

My experiences of travelling through Europe and the Med have taught me not to expect too much as far as the aquarium hobby is concerned. In some countries the hobby is thriving, whilst in others it is almost non-existent. Malta was a bit of a surprise! For a small island (about the size of the Isle of Wight), Malta has quite a reasonable aquarium hobby, with several aquarium shops dotted around the place. Unfortunately, my brief stay meant I had time to visit only one shop, called "Nature World", in Msida. This was partly a pet store, but also had an aquarium back-room housing 60 tanks.

It was well set out, with the aquaria (all freshwater), tastefully displayed within wooden panelling and very clean and tidy. They had a fair selection of fish with many 'bread and butter' species, as you would expect from any retail shop, but also a fair number of less common ones, including a good range of Cichlids. Prices were generally on a par with what you'd expect to pay in England, so I guess the hobby is perhaps a little more expensive than compared to over here.

Here are some of the retail aquarium shops to be found on the Island in alphabetical order:

- Aquatica, 120 Old Railway Track, St. Venera
- Blue Acara, 21st Sept Avenue, Naxxar
- City Pet Shop, 93 Mercants Street, Valetta
- G & I Pet and Aquatic Shop, 32 Triq l-Oratorju, Mosta
- Golden Fins, St. Peter Street, Fgura
- Nature World, Rue Dargens, Gzira
- Petmate, 17 Mannarimu Road, Birkirkara
- Pets Paradise, Testaferrata Street, Msida
- The Aquarium (discuss specialists), 17 St. Joseph Street, Msida
- Tiarellis Pet and Garden Centre, 44 Psaila Street, Birkirkara

There is also a Maltese Aquarist Society (affiliated to the FBAS), which has about 300 members - fantastic numbers by UK standards. They have their own premises, which means they can leave their show tanks set up all the time and no-one means if a little water gets spilled on the floor! What's more, the Society quarters also contain a small dry goods shop, which opens on Sunday mornings when the Club meets, and also on a weekday evening.



TOP: Robert O'Grady receiving his awards from Federation of British Aquatic Societies' Chairman, Joe Nethersell at "Fishworld '98". Robert is also one of the first Juniors for years to have attained his Bronze Award



BOTTOM: Angela Cank receiving her awards from Federation of British Aquatic Societies' Chairman, Joe Nethersell at "Fishworld '98"



**LETTERS ABOUT
"FISHWORLD" MAGAZINE**

*Enjoy the magazine very much and as a Cichlid-lover I would like to read some Central American Cichlid articles and about Cichlids in general.
Keep up the good work.*

Thanks for your kind comments. Unfortunately I can only print the articles that are sent to me. I do generate some material myself, but I am not a Cichlophile and would, therefore, not be able to write an article on the subject. Come on all you Cichlid lovers out there. Write me an article to keep PH happy!

I find it strange that you include a children's section. It puts you more in league with "Women's Weekly" rather than TFH.

The Junior Section of "Fishworld" is aimed at under sixteens in general, some of whom are notable fishkeepers in their own right. The future of our hobby, the conservation of fish and their habitat lies not just with our generation IR, and we have a moral obligation to 'educate' and

'enthuse' the next generation to take over where we leave off. We have a very strong following within the NFSA and the section within "Fishworld" that you speak of is primarily aimed at them. You will note from the articles included (such as those on Sweettails and Water Quality) that we do not 'talk down' to the younger element in the hobby. These articles are worthy reading of the seasoned fishkeeper.

I cannot comment on the "Women's Weekly" children's section, but I do not aim to emulate any other publication on the market. "Fishworld" is "Fishworld" and is on the market in addition to other publications (such as TFH), not to replace them! Thanks for some constructive criticism for a change, though!

*Many thanks for excellent in-depth article re Aspidoans (Roger Crew). I have only recently managed to purchase seven Aspidoans menezesi, and hopefully by following the guidelines in the article I may have some success in breeding them.
Congratulations on your post as Editor, the current issue is packed with excellent information.*

Thanks for boosting my (and Roger's) ego HB!

You are safe to assume that the breeding information given for A. fuscoguttatus is the same as that for A. menezesi. Good luck with your breeding plans. Whether you are successful or not drop me a line to tell me how you got on and I will publish the information for others to read and learn from.

POECILIA 'FORMOSA'
(Girard 1859)

(Reproduced with the kind permission of "Viviparous" magazine)

Family: Poeciliidae Girard, 1895

Synonyms: *Limia formosa* Girard, 1859
Molienasia formosa Gunther, 1866

This is not a true species as such but derives from hybridisation between *Poecilia latipinna* and *Poecilia mexicana*. Female Amazon Mollys use the sperm of any male *Poecilia* to activate the development of their eggs. The male's genetic material is sometimes incorporated in the offspring but more often than not they are clones of their mother.

Common Name: Amazon Molly

Range: Found in the lower Rio Grande valley of Texas and headwaters of all the intervening drainages as far south as the Rio Tamesi near Tampico, Mexico. It is also found in lowland coastal streams and lagoons around Tampico as far south as the mouth of the Rio Tuxpan.

Dorsal Fin Ray Count: 11 - 14 rays.

Size: Females 6 cms

Introduction to the UK: Although it was first introduced to the UK during the late 1970's it has died out several times due to lack of interest. The recent stocks are descendants of fish collected in the Rio Tampico where they are found together with *Poecilia latipinna* and *Poecilia mexicana*.

Description: The Amazon Molly is usually a fairly plain looking fish with a few black spots which tend to form crescents in the dorsal and caudal fins. In many ways they are typical of *Poecilia mexicana* females with brown to greenish upper bodies becoming white on the belly. A blue sheen is often seen on the belly. This is strongest just before giving birth. The eye tends to be larger in this fish than in *Poecilia mexicana*.

If Black Mollys have been used to fertilise the Amazon Molly, black speckled offspring are sometimes produced. They can vary between fish with just a few black speckles right the way through to almost totally black fish. If these fish are bred back to a wild type Molly then the F2 offspring will not display any black pigmentation.

Temperament and Care: This is a peaceful Molly which does just as well in a mixed community tank as it does in a species tank. It prefers hard alkaline water maintained at a temperature of 75 to 80F. The aquarium should have some filtration and aeration as well as regular partial water changes.

They seem to be happiest when living in a tank with plenty of plant growth. In this sort of setup they will graze on any algae and fine leaved plants whilst waiting for something more nutritious to come along. They should be fed on a good quality flake food with the addition of live foods like *Daphnia* and Brine Shrimp.

Broods are born on a monthly cycle and can number upwards of 50 if the adult female is large and well fed. These can be sired by any Molly or closely related

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species. Guppies and Linias have also been successfully used but numbers of offspring were substantially reduced.

Preventing Hybrids: This section obviously does not apply to this fish, however, it is a good idea to keep them away from female *Poecilia mexicana* in case you mix them up and pass on to another aquarist an Amazon Molly as a female *Poecilia mexicana*.

VIVIPAROUS

Viviparous is a specialist society concerned with livebearers and has a wide membership.

The Society boasts its own Breeders Award Programme, Species Maintenance Programme, Fancy Guppy Section, magazine, web page and regularly holds conventions and auctions.

The magazines (at the time of writing on the 41st edition with back issues available) usually contain two fish features with colour photographs of each of these pasted to back and front covers. The photographs are all high quality and themselves well worth having. In addition there is usually a fairly 'meaty' specialist contribution, perhaps regarding a collecting expedition. There is also a contribution from the Fancy Guppy Section which will be thoroughly enjoyed by the 'guppyphiles' amongst us. To whet your appetite to new and old species of fish, there are also listings of availability of fish from various breeders around the British Isles.

Membership will only cost you £8.00 (post paid) each year. You can become a member by contacting Mrs. Pat Lambert, North Side, Spridlington Road, Faldingworth, Market Rasen, Lincs LN8 3SQ. Tele: 01673-885-352

OVER WINTERING PONDS

by Sue Crew

Now is the time to start planning how you will care for your pond or water feature this winter.

Check whether or not all your plants are hardy for British winters. A lot of those sold (e.g. Water Hyacinth) are not. If you do not have any good books to refer to, visit your local library and check your plants out in their water gardening section. Lift out any plants that are not hardy and put them in a bucket or bowl of water in a frost free environment. A greenhouse or conservatory will probably be quite adequate for the purpose. Cut back your oxygenating plants early in October and ensure you remove all dead or dying foliage. Also cut back the stems of your marginal plants once the leaves and stems have started to brown as the overwintering stems will provide a haven for insects and pests. You should leave only a few inches of stem above the water, especially if the stems are hollow.

Floating plants can be left to form the buoys that sink to the bottom of the pond to overwinter before developing into new plants from them next spring. To ensure an early crop from floating plants, take a few of the buoys and take them inside. These will germinate earlier than those left in the pond and provide early cover against green water and algae if planted out as soon as spring arrives. Try to remove the yellow or brown leaves from Water Lilies and ensure no old flowers remain to decay in your pond.

If you have a pond pump, although hopefully you have been regularly maintaining it through the summer months, you should seriously consider giving it the 'once over' in readiness for winter if you are leaving it in the pond to reduce the likelihood of the pond freezing over.

The pond pump should be left running if you are leaving it in your pond as this will prevent it getting clogged up or seizing up altogether. If you don't want to run it over the winter months you are best to remove it from the water altogether.

Whatever you are planning to do, it would be a good idea to give it a good clean and check that it is still safe by inspecting the electric cables and other electrical fittings.

Make sure you disconnect the power to your pump before you remove it from the water and clean the outside casing by using a small stiff brush to remove algae and slime build-up. An old toothbrush which had been thoroughly cleaned to remove all traces of toothpaste is ideal for this job. Do not use anything other than warm water to do this as many detergents are toxic to fish, plants and the bacteria in your filter, which if harmed will affect the water quality in your pond.

Next, remove the filter media and using a bucket of pond water rinse away any solids. You should always rinse the filter in pond water. Tap water will kill the friendly bacteria which has built up over time and helps to maintain the condition of your pond water. By using pond water you will only be putting the same water through the filter media that it is used to and will therefore protect the bacteria.

You can then re-introduce the pump to the pond or water feature. Bear in mind that as the water gets colder the fish will require less and less food until they require none at all till spring comes and the water warms. Feeding fish in winter can be positively dangerous to the fish as their metabolism will slow to almost a state of hibernation and they will not be able to digest any food they eat. The undigested food will then sit in the gut and eventually the fish will die. Reduce feeding the fish slowly to match the gradual overall drop in temperature or you

will starve them!

If you are removing the pump until the spring, you can use tap water to clean it as the bacteria will die once dried out anyway. Remember to put the pump back together again or you will probably lose some of the parts. It is advisable to re-introduce the pump to the pond prior to commencing feeding the fish again so that bacteria can build up in the filter media before any additional 'load' - in the shape of digested food - is introduced.

If you have a surface pump it is advisable to drain it, clean it and store it away until spring and the chances of freezing have gone.

Where your pond is heavily stocked with fish, it is advisable to carry out a water change in the autumn to give the fish their best chance over the winter period.

The autumn is a time when we get high winds and deciduous trees shed their leaves. This is the bane of the pond keeper's life. Rake or scoop out the fallen leaves regularly so they do not get the opportunity to decompose and give off poisonous (to wildlife) gases. In the same way you should remove any dead or dying leaves on water plants. These gasses will build up in your pond, especially in water iced over.

Before you make the decision to remove your pump for the winter months, remember that the movement it creates - and perhaps a fountain if you have one - can reduce the likelihood of your pond iced over totally if it is not too hard a winter. With their lower metabolism and cooler water fish will require less oxygen, but they still require some to live!

Your fish will not die from the cold, but the covering of ice which prevents oxygen getting into the water. They will, in fact, suffocate to death.

It makes sense, therefore, for you to try to keep a patch of surface water free from ice.

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There are several ways in which you can do this.

You can float a rubber or plastic ball, a piece of wood or polystyrene in the water. This works quite well if there is air movement to keep the object moving, otherwise it will probably just freeze into the ice. To overcome this you can place the object on the water in the evening and remove it in the morning.

If you have a power supply quite close to the pond - which is likely if you have a pump - you can use a floating pond heater. Ensure that all your electrical connections are waterproof, though! These heaters are quite economical to run and will prevent the water around them from freezing over even if the rest of the pond is a sheet of ice.

A cheap and economical, but time-consuming way of keeping an ice-free patch of water is to heat a saucepan full of water and hold it on the ice until the ice has melted. You will obviously need to do this a couple of times a day at least in really cold weather, but it can be a useful method in cold snaps.

Never ever crack the ice. This will shock the fish and could result in fatalities. It will also increase the pressure under the ice, which might also kill your fish.

If your pond does freeze over for very short periods, take the chance to lift off Duckweed that had become a nuisance, it may be your only chance!

Act before winter sets in with a vengeance and reap the benefits next spring.

FURNISHED AQUARIA

PART 3

by Malcolm Goss

In part two we discussed the importance of rooted plants vs. cuttings like Cabomba aquatica which is available in red or green forms. I spoke of using the family Vallisneria as background plants with their light green grass-like leaves.

However, there are no better plants than the Cryptocoryne family for planting in either foreground or midway in furnished aquaria. There are many species of them, with a multiplicity of variations in leaf shape, colour, height and growth rate. All of these features are dependant upon water conditions, substrata and light. Fish and snails can help their growth, but more often they eat them!

Cryptocoryne in general prefer soft water (ideally a mix of 50% rainwater to 50% tap water if you live in S. or S.E. England. Aquarists living in soft water areas can use water straight out of the tap.

Often Cryptocoryne grow in shaded or dappled sunlight, with small species growing under the shade of the leaves of larger plants. They like to get circulation around their roots to maintain root growth, so ensure the substrate (gravel) does not become compacted. It is advisable to lightly turn the gravel from time to time using the flat end of a planting stick in a twisting action (similar to hoeing the borders in your garden). *C. evae* is the exception to most Cryptocoryne with its large light green leaves. It is majestic in appearance and makes an excellent background plant, possibly in a corner, depending on the size of your aquarium.

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JACK THE LAD

by Jack Stillwell

THE WAY FORWARD... PARTICIPATION

A letter I received recently from a disgruntled club secretary has prompted me to look forward this time, instead of my usual recollections from the past.

There is no doubt that things have changed since the 50's and 60's, and attitudes are vastly different today from then.

With the advent of television, satellite communication, videos, personal computers, the Internet and the digital technology now emerging, the hobby of fishkeeping and breeding is declining fast with the result that there now exists only a fraction of the clubs that there were in those early days. Many of these clubs exist on a shoestring with minimal membership. Perhaps, instead of using the new technologies, we have allowed them to destroy us. People do not now need to belong to a club in order to learn, these days the information is laid on for them in the comfort of their own homes. The pioneering days of fishkeeping have all but gone, everything is easily available to the fishkeeper. What was difficult yesterday, is easy today, yet there is so much we still do not know. (Ed's note: there is also a lot of knowledge we have lost by not listening to our elders.)

Gone are the days when club members would turn out to hear a lecture each

month. If clubs are to continue to flourish they must start **DOING** things. Participation, participation, participation is the key to success.

You can only get out as much as you put in and there are plenty of outlets for activities in which your club can take part. Just look around and you will find the most successful clubs taking part in shows, exhibitions, conventions, fairs, fayres, quizzes, festivals, auctions and local community events. They are not there because they are successful, they are successful because they are there.

If you can't do it on your own, join forces with a neighbour. You could even form an area group!

Despite all the modern technology, there is still nothing to replace social contact, the wider, the better. Don't be a couch potato, get out and join in the action. I promise you it works, and I should know. My 50 years of participation has repaid me a thousandfold, especially after I lost my wife.

By now if you are remotely alive you must be bursting to comment, so don't delay. Put your thoughts on paper and share them with our readers, or if you prefer it, write to me and I will make sure your ideas are aired where they really count.

Jack.

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Another specimen plant is Cryptocoryne balansae, which is a commanding plant, but in contrast to *C. evae* with tall narrow leaves (strongly puckerred, highly indented), which easily reaches the aquarium's water surface. *C. parva* is an ideal foreground plant with light green spear-shaped leaves and needs to be planted in clumps to full effect.

C. affinis can be used towards the back of the aquarium. It has dark green leaves with red-purple undersides. They will spread and spread, but it is easy to control the spread by removing surplus plants. Good mid-way aquarium plants can either be *C. beckettii* or *C. wendtii*. These have varying leaf colours from green to brown and both grow up to 4" (100mm) in the right conditions. These slow-growing plants do not like to be moved, often taking months and years to get established. Like most plants Cryptocoryne do not like fast moving water, so turn down air and filter outlets. Twelve hours of light are required to achieve good growth, but more subdued light levels are acceptable to Cryptocorynes.

Some larger plants need to be fed about twice a year. This can be done quite cheaply by rolling a small marble-sized ball of clay and pushing this into the gravel close to the root of the plant(s). This acts as a slow fertiliser and the benefits will be seen not only in the growth of the plant, but also in the quality and colour of the foliage.

Echinodorus species are nearly all specimen or background plants, due to their size. Most of them grow out of the water in their natural habitat. I have an

E. rigidifolius that is growing some 2' clear of the water and totalling approximately 3' tall from the roots. Echinodorus - in contrast to Cryptocoryne - have large bright green leaves and require strong light for at least twelve hours per day.

With this in mind, Cryptocoryne can be planted to good effect in shaded light from the large leaves of the Echinodorus species, it not only looks natural, but is also functional and attractive. Echinodorus cordifolius (radican) is a plant with one name covering half a dozen types. All have very broad, light green leaves. Echinodorus major (Amazon Sword) is a plant easily recognised with its less broad, light green leaves and has been known to aquarists for many years. Newer species now available are Echinodorus horemanni with either red or green leaves with a wonderful leaf pattern showing clearly the veins and structure of the leaf. *E. uruguayensis* is a much rarer plant to buy, with long slender leaves, which are once again light green in colour.

Look for *E. schlueteri*, a broad leaved plant with distinctive brown spots over leaves of light green. It is a compact plant ideally situated to the midway position in the aquarium.

Lastly, the exception to many Echinodorus. That is *E. latifolius* (Dwarf Sword), which grows to 4" (100mm) with chain-like runners spreading throughout the aquarium quite rapidly if given the correct conditions.

In part 4 of this series, I will describe using plant layouts to create a perfect-looking aquarium.

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INTERPET CONTINUE SPONSORSHIP

Interpet has been sponsoring the FBAS Championship Class trophies for nine years now, and have agreed to a further three years sponsorship with FBAS Chairman, Joe Nethersell.

The winners so far this year are as follows:

- Mrs. Garner Jones - *Lamprologus richardi* (Ashby)
 Allan Finnigan - *Mogurnda mogurnda* (Northampton)
 Hayden O'Grady - *Synodontis angelicus* (Eastleigh)
 Tony Tyson - *Synodontis frontosus* (Aberdare)
 Mr's Mogford - *Tilapia butikoferi* (Bishop Auckland)
 Mr's Mogford - *Tilapia butikoferi* (Robin Hood)
 Mr's Jones - *Zoogeometricus quintzeensis* (YAAS)
 Stephen Jones - *Betta splendens* (AAGB)
 John Egan - *Hypheosobrycon metae* (Malvern)
 Gary Thwaites - *Cobitis macrostigma* (Strood)
 Mr's Mogford - *Tilapia butikoferi* (Hull)
 David Wyper - *Xiphophorus nezahualcoyotl* (Kircaldy)
 Paul Whiddett - *Labeo lineatus* (Swindon)
 David Clarke - *Lamprologus brevis* (Corby)
 Mr's Mogford - *Tilapia butikoferi* (Four Lane Ends)
 Gary Randall - *Xenotoca melanostoma* (Isle of Wight)
 Alan Best - *Corydoras gossei* (Fishworld '98)
 G & J Bell - *Aristogramma vicifia* (Coer Urfai)
 J Pinto - *Heterichthys robensoni* (Bristol Tropical)

- John Egan - *Callichthys callichthys* (Bracknell)
 Alex Stephenson - *Bristol Stubunkin* (Welland Valley)
 Ian Rowbottom - *Hypostomus margaritifer* (St Helens)
 T & A Cannon - *Labeo bicolor* (Seascale)

The results of the British Open Final held at "Fishworld '98" on 31/5/98

- 1st Tony Tyson - *Leporacanthicus galaxias* (88 points)
 2nd Allan Finnigan - *Mogurnda mogurnda* (87 points)
 3rd Mr's Mogford - *Tilapia butikoferi* (86 points)
 4th Tony Tyson - *Synodontis frontosus* (85 points)
 5th Bob Street - *Crenuchus spilargis* (84 points)
 6th David Wyper - *Xiphophorus nezahualcoyotl* (83 points)

There were 23 entries in the British Open Final this year. The Judge was Mr W.G. Best whose overall assessment of the standard of fish he judged was good.



Alan Finnigan receiving his prize from Joe Nethersell (FBAS Chairman)

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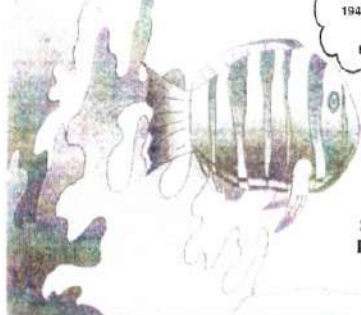
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SHOWS Telephone orders for collection at Assembly or shows.

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JUDGES CORNER



Welcome to the September edition of the Judge's page. As you are all aware, this is the third I have had the privilege to write on behalf of the Judges and Standards Committee.

By the time you read this, the show season will almost be over and there will only be one or two Open Shows left before the Supreme Festival of Fishkeeping at Weston-Super-Mare. With the end of the showing season in mind, now is the time for all Judges to think about the size adjustments for next year's size sheets. As you already know, I have requested that all Judges and Competitors think about reductions in sizes as well as increases. I would like these recommendations by the end of November 1998 at the latest, please, so that the Judges and Standards Committee have enough time to evaluate the information, for me to type the new sizes onto the sheets and send them in for printing.

Last year a new format for the size sheets was introduced and I have had a very favourable reaction to them. If anyone has any other new ideas to try to improve them, please contact me at the address below.

In the last quarter's column, I asked about the fish we know as "Astyanax columbian", which can be found in Mergus Aquarium Atlas Volume 5, page 54. As I had hoped, someone has managed to breed these fish and in the next quarter's Judge's page I hope to give details of how this was done. Mr. G. Best (the successful breeder) lives near Bath and I will pass on his expertise in the next issue. Has anyone else bred any different fish lately? If so an article could be produced for "Fishworld" so that others can benefit from this experience. I will pass on such articles to the Editor if you want to send them to the address below or you can send them direct to her using the address in your Year Book or that on the inside front cover of "Fishworld".

A number of Judges have taken upgrading tests this year so look out for new names in the Assembly Minutes to find out if any Judge in your area has been upgraded. I will provide a full list of Judges who have been upgraded this year in the next issue of "Fishworld". Also the 1999 Year Book will have the updated list of all Judges with their current grading.

If anyone is interested in stepping onto the rungs of the ladder to become a Judge, please write to me and I will provide any information you require on what you need to do to become a Federation of British Aquatic Society Judge.

Colin Pannel
Secretary
Judges & Standards Committee
9, Edwin Road
Hastings
East Sussex
TN35 5JT

1998 SHOW DATES AND EVENTS

Rule Codes: A = A of A; FB = FBAS; FN = FNAS; FS = FSAS; U = US of A; Y = YAAS;
B = BKKS; BK = BKA; I = International Goldfish Standards;
N = NEFAS; C = CAGB

1998	
5.9.98	Bristol AS (FB)
6.9.98	Aldon AS (YAAS), Cramlington AS (FB), Cardiff AS (FB), Leics BKKS Show (BKKS), South London AS (A)
	ASAS Auction (F)
7.9.98	Hounslow AS (FB), Clacton AS
12.9.98	Mid-Somerset (BKKS), Silkton AS (FN), Lincoln AS (Y)
13.9.98	Redhill & Feigate, Plymouth AS (F)
19.9.98	Mid-Sussex AS (FB), CAGB Northern
20.9.98	Osney AS (Y)
21.9.98	City AS (Y)
26.9.98	NGPS (Goldfish)
27.9.98	Darwen AS (FN), Fair City AS (USA), Northern Koi Club Open Show (BKKS)
4.10.98	Grangemouth AS (FS), Basingstoke AS (A)
11.10.98	Washington AS (FB), Doncaster AS (Y)
18.10.98	Solway AS (FS), Halifax AS (FN), West Cornwall AS (FB)
24-25.10.98	British Aquarist's Festival, Manchester (FN)
30.10-1.11.98	Supreme Festival of Fishkeeping, Weston-Super-Mare (FB)
1.11.98	Bradford AS (Y)
15.11.98	FNAS Auction, Billingham AS
1999	
7.3.99	Eastleigh & District AS (FB)

NOTE TO SHOW SECRETARIES

The above dates are those available at the time of going to press. For the latest, most accurate dates and venue information (and trophy allocations where applicable), please refer to the Quarterly Supplement issued by the FBAS giving details of shows around the country. The

Supplement is available, price 50p post paid from:

SHOW INFORMATION,

Dept. FW, 22, Flamsted Avenue, Wombley, Middlesex HA0 6DL
In order to provide the most complete service to all Societies, please communicate your show information to the same address.

Federation of British Aquatic Societies

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 - "Hagen" Masters Open Show (Sunday)
 - National Junior Fishkeepers Association
 - Junior Fish Show (Saturday)
 - "Nutrafin" Trophy of Excellence
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