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Dear Reader

I am sure you will have noticed, *FishWorld* has undergone a face-lift as can be seen by the excellent new cover design. Little did I think that by asking for cover design suggestions in December's issue that I would receive anything quite like it. It is a truly professional piece of work, and all credit must go to Andy Kornbotham from Gloucestershire A.S. for coming up with a ready-to-go masterpiece.

I had been expecting a few basic sketches from which a complete master would have to have been made by a professional art studio at some considerable cost. Now all we've got to do is think up some suitable 'reward' for Andy; if you like the cover, then should you be in contact with Gloucestershire A.S. for any reason, do let them know of your appreciation.

So why did *FishWorld* need a face lift? Well, the old design was a bit boring and conventional, the alternative of having a different fish on the front for each issue would have been rather expensive to process and a recurring task to do: the new design has been chosen as it reflects all aspects of fishkeeping in one fell swoop — fish (marine, freshwater, tropical and cold-water) and plants (tropical and cold-water) — and we can get the whole year's covers done at once. Of course, you have already spotted its main purpose — to attract readers (and subscribers) — as its design and colours will assuredly do.

Speaking of colours, look out for a colour problem with Redcap Orandas in this issue; Terry Waller and John Edwards are also continuing their respective columns whilst Nora Green has another individualistic view on fishkeeping. Just too late for Christmas, there are a number of new books out whilst for those computer-literate types we have news of some edutainment software.

Last issue, we introduced a 'Pull-Out' Fish Information Section, a feature continued this time too, and we now introduce another new item in the shape of a Suggestion Sheet in which there are instructions for Society activities. The first of these will give you some idea of what they're all about and we do welcome ideas from you, if your Society has a favourite event that others could usefully follow.

Dick Mills, Editor, *FishWorld*

Contributors for the next issue should be in hand by April 8th 1996 and sent to: *FishWorld* Magazine, 10 Rooken Grove, Farham Royal, Basingstoke, Hampshire RG7 3JZ. (Tel/Fax: 01253 846134)

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1996 SHOW DATES
(Rule Codes: A=A of A, FB=FBAS, FN=FNAS, FS=FSAS,
I=International Goldfish Standards, N=NEPAS, U=USofA, Y=YAAS)

3.3.96	Burley in Wharfedale A.S. (Y)
31.3.96	Earleigh A.S. (FB)
31.3.96	Northampton A.S. (FB)
5/7.4.96	Strothclyde Aquarist Festival (FS)
7.4.96	Milvern A.S. (FB)
13/14.4.96	Yorkshire Aquarists Festival (Doncaster) (Y)
21.4.96	Kirkcaldy A.S. (U)
21.4.96	Strood A.S. (FB)
28.6.96	Coer Urfa A.S. (FB)
28.4.96	Robin Hood A.S.
28.4.96	Swindon A.S.
4.5.96	Southend, Leigh & D.A.S. (FB)
5.5.96	Brockwell A.S. (FB)
5.5.96	Gateshead A.S. (FB)
5.5.96	Mussetburgh A.S. (FS)
12.5.96	Bournemouth A.S. (FB)
12.5.96	Cast BB (FN)
12.5.96	Corby A.S. (FB)
12.5.96	Four Lane Ends A.S. (FB)
19.5.96	Cardiff & Dist. A.S. (FB)
19.5.96	Isle of Wight A.S. (Grocklemania Weekend) (FB)
9.6.96	Marseydale A.S. (FN)
9.6.96	Reckar A.S. (N)
23.6.96	Warrington A.S. (FS)
2.7.96	Sandgrounders A.S. (FN)
6.7.96	Port Talbot A.S. (FS)
3.8.96	Gloucestershire A.S. (FB)
11.8.96	Saltbury A.S. (FB)
1.9.96	Cramlington A.S. (FB)
1.9.96	Dunstable A.S. (A)
7.9.96	Bristol A.S. (I)
14.9.96	Hounslow A.S. (FB) (rbc)
28.9.96	Bristol Trop. F.C. (FB)
28.9.96	Northam Goldfish P.S. (I)
6.10.96	Halifax A.S. (FN)
6.10.96	Washington A.S. & P. (FB)
20.10.96	West Cornwall F.K. (FB)
3.11.96	Supreme Festival of Fishkeeping (FB)

Note to Society Show Secretaries:
The above dates are provisional and are those available as *FishWorld* went to press. For the latest, most accurate dates and venue information (together with trophy allocations, where applicable), please refer to the Quarterly Supplement issued by the FBAS giving details of Shows around the country. The Show Supplement is available, price 50p post paid from:

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From the Vice-Chairman

As you will see from the following, there is almost too much a coincidence of things for it not to be, well, coincidental.

As the Federation meets on the first Saturday in March, for its quarterly General Assembly, I wonder just how many delegates and visitors attending will be aware that it will be 50 years to the very day of the first meeting of the Federation held, after the end of the War, on March 2nd 1946.

At that time, The Chairman was Alex Frazer-Brunner and the Secretary H.J. Dunbar. Meetings were held at the Friends Meeting House, Euston Square, just up the road from our present meeting place at Red Lion Square. The FBAS published its aims and policies for the future and we could spare a moment or two to consider them now; just how far have we achieved those early goals or have we done far better than was hoped for, even in those ambitious euphoric days of peace?

The Federation's original aims were to co-ordinate the activities of Clubs in the general interest of the hobby; to encourage and stimulate inter-Club Shows and competitions; to encourage and assist breeders; to establish National Standards in order to increase and improve livestock; to help in the formation of any new Clubs and the development of smaller ones and to make available specialised information and authoritative lectures. At this meeting, it was agreed that these aims should again be adopted.

Of course, there will be people saying, 'There goes old Jack, getting misty-eyed about things again' but I would point out to these folk that I didn't attend my first Assembly until six years later (in 1951) by which time much of the pioneering work was, and had been, well under way. But back to coincidences.

Little did I know that when I was elected to the position of Vice-Chairman it would be so short a time before I was 'called up for duty' (in the absence of the globe trotting Chairman) to write a few words for Fishworld. However, there I was at home having just posted off an article about this 'Anniversary' to the Editor when he rings me up and says 'Jack, you're in pole position for Fishworld.'

My first reaction was to say 'Come back Peter!' but, then I thought, we have a system and it needs to be seen to be working. Being Vice-Chairman has its responsibilities, just like all the other Council positions, and I am grateful of the opportunity to fulfill at least one of them by pointing out to you the long tradition of quality services that the Federation has upheld throughout its history, very much in line with those early aims, and which I hope to have the pleasure of watching it continue to do so.

Jack Stillwell, Vice-Chairman, F.B.A.S.

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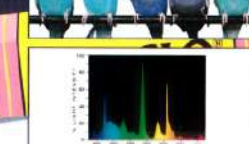
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Breeding Characins

by Terry Waller



Breeding fishes from the Characin Family presents the amateur breeder with probably his biggest challenge.

The fishes we have been working with over the last issues have all been bred in normal water conditions. The Characin Family is going to present us with our first venture into water chemistry. Once you have bred and successfully raised Characins you can truly say that you are a fish breeder — they represent a yardstick in the fishbreeding world.

Characins are found in Africa and all over South America and up into Mexico, but the biggest concentration is found in the River Amazon and its tributaries. If we look at a map of the world and study the similarity of the *Alestes* of West Africa and the *Brycon* of South America we can add weight to the validity of the Gondwanaland/Continental drift theory that accounts for so many of the similar habitats and locations of fish Families, be they Toothcarps, Cichlids or, as in this case, Characins.

Characins, like so many fish Families, are diverse in the extreme. Here we find fishes so different in size, shape and colour, as well as in temperament and habit as to make your mind reel — especially as there are about a thousand species! Fishes that are plain in colour or brilliantly fluorescent; peaceful fruit-eating fishes or voracious fishes like the 'Older' Tiger Characin (*Hepsetus odoe*) or infamous, legendary Piranhas. Some Characins, Tetras for example, grow two inches or less, others we have to measure in feet and are respected as sport fish by anglers. We have fishes that swim 'goby-fashion' and others that skip along the surface of the water; the majority, however, swim in mid-water shoals. The fishes we are going to try to breed come under the heading Tetra and are scientifically named *Hypessobrycon* or *Hemigrammus*.

We will also include a couple of other Characin species to give us a wide range to choose from.

When buying Tetras try to purchase them in half, or full, dozens; this need not result in taking out a second mortgage, as most of these fishes are under a pound, and even cheaper when bought in large numbers. The advantage in buying in numbers can easily be seen — the fishes naturally shoal, so they need to be kept in shoals where they will display their natural behaviour almost without thinking. From the shoal, we have the best opportunity to select the best fish from which to breed and sort out the males from the females. This is not always easy. A Rule of Thumb is that males have hooked anal fins whilst the females' are rounded. To determine the sex differences it might help to use a magnifying glass. (Years ago a scientific approach was used to sex Tetras; you caught a netful then turned the net over — those that fell out were females the remainder caught on the net by the tiny anal fin hooks were males. Try it, but make sure the net is over water, not the floor!)

The Tetras we are going to work with are the Lemon Tetra, Serpae Tetra, Head & Tail Light, Glowlight, Flame Tetra and X-ray Tetra (*Pristella* sp.). All can be sexed as described above. Also, I have included some other Characins, similar in size but easier to sex — Emperor Tetra, Diamond Tetra and Black Widow. The first two have extended finnage on the males whilst the third has as swollen body shape in the female (quite noticeable), all are easy to obtain, quite cheap and probably have one thing in common that will work to our advantage — they have never seen their native waters being bred for the trade in far eastern Fish Farms! Captive-bred fish are generally easier to breed than wild-caught stock.

Breeding Characins

(continued)

Having made our selection of fish species, and purchased as many fish as we can afford, we must now start sorting out the equipment. We shall need:

- an aquarium — 18 x 12 x 12 inches approx.
- a heater/ster
- a small filter
- a top glass
- a pre-1960 armchair
- one leg from a pair of tights (your wife's/girl-friend/someone else's lady friend!)
- a large bucket

It is my contention that, in their natural habitat, fishes spawn during the wet season or when the river levels rise due to rain or from meltwaters from mountains etc. We are going to replicate these conditions in the breeding aquarium. If coated by rainfall (which is as spectacular as Manchester weather on the first day of the test match) or by melting snow, the resulting flooding provides plentiful amounts of two very important things for the breeding fish — space and food. Also it alters the conditions of the water itself which becomes softer and very acid; this I believe, is Nature's way of conditioning the fish and the trigger to start off the spawning frenzy.

Fill the spawning tank with water and place it in a light, sunny position. Put the filter and heater in place and leave for a few days. At the same time, fill a large bucket with water collected from a rain-but (you might have to organise this or look around your neighbours' gardens). Take the leg of the tights and stuff a couple of handfuls of aquarium peat into the foot, but off at a convenient length and knot it tight. This can now be placed in the water-filled bucket.

After a few days we will place the fish in the spawning tank but first, put a tank divider in. We will need two

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females and three males (carefully studied and sexed accordingly) with each sex group placed in the tank on different sides of the divider! Feed them for a week on *Daphnia*, *Tubifex* and mosquito larvae — then we're ready. Meanwhile, slash the armchair open and you should find it stuffed with horsehair (if not old, white £5.00 notes). Pull out a handful and place in the spawning tank on the females' side of the divider. Seriously, you must provide some bushy material (dense bunches of plants, mats of nylon wool) in which the spawning act can take place and fertilised eggs be trapped and be safe from the now hungry, sex-satiated adults.

Position the bucket of by now acidified rainwater above the spawning tank so water can be siphoned from it into the tank, remove the partition, switch off the heater and carefully siphon out the aquarium water down to a depth of a round 1½" — 2". Using airline tubing siphon in the acid rainwater until the water level is about two inches from the top. Put on the top glass and switch on the heater. I usually do this in the evening and expect the fish to spawn as the sun comes up the next morning.

Examine the 'horsehair' (or whatever spawning medium you use) from time to time, by peering through the front glass with a magnifying glass. The fishes will have scattered their eggs and won't take any care of them at all, so if you don't remove the adults as soon as you see eggs they'll eat them, it's as simple as that. The eggs hatch out between 24-36 hours then go through a 'hanging on' stage of about a further 12 hours. **Don't feed until you actually see them daring about.** When you first see eggs, start getting your foods ready: start your brine shrimp culture and check that your micro-worm culture will last for a few weeks.

Feed brine shrimp in small amounts but frequently, I would say about 4-5 times a day. After a week

Breeding Characins

(continued)

siphon off about an inch or so of water and replace with tapwater of the same temperature. From now on, every three or four days keep removing about an inch of water and gradually you will bring the soft acid water into line with ordinary tap water conditions. 'A little but often' is the Golden Rule both for feeding and water changing so as not to stress the fish. After three weeks, change the diet up to micro-worms and follow this with crushed flake food and sifted *Daphnia*. With your regular siphoning out, you are

not only slowly acclimatising the fish to standard water conditions but also siphoning off dirt and uneaten food that will collect on the floor of the tank. Obviously this has to be done with great care so as not to suck up baby fishes as well.

Good Luck! Stick to the task because you are quite likely to have a disaster raising Characins than with any other fry. Just be careful, don't be impatient and remember the Golden Rule - 'Little and Often'.

LETTERS

In the December issue of FishWorld, there was a letter from Mr. Mays of the Water Research Centre in respect of Ann Telford's article in a previous issue. Since then, discussions have taken place between Mr. Mays and Ann Telford the result of which is the following letter to Mr. Mays, a copy of which Ann has sent to FishWorld for the benefit of readers. It seems to further indicate that while there is quality control, exactly what is covered by certification may not be all what it seems, and certainly not necessarily beneficial to our fish.

Dear Mr. Mays,

Following the publication of your letter in the last issue of the FishWorld Magazine re my article [Choosing a Tap Water Purifier: Handling New Water for Fish & General Water Conditions], I was pleased to be able to talk to you about the use of non-metallic materials in water for fish, i.e. the reference in my article being the use of particular vessels used in purifying systems. Thank you for the courteous reception you gave me and your time in what is a very busy schedule.

We obviously share the same aim which is to ensure that the members of the public are given accurate information. It is to the credit of the Water Research Centre that although the provision of non-metallic materials for water for fish does not come under the responsibility of the WRC, nevertheless you were prepared to check this script for technical accuracy before it was sent to the editor for publication. I am sure this can only be of value to fishkeepers.

To keep this short, I have abbreviated our discussion to simple statements (I am also avoiding writing another article at the current time!)

You noted my view that the needs of people and fish are different and acknowledged that published information is widely available to the public about the different water parameters for people and probably fish (I am happy to supply an appropriate 'fish' reading list to fishkeepers, it would be unfair of me to expect the WRC to do so).

We then agreed

1. Water Research Centre Certification is sought by manufacturers in the support of the use of their product(s) with drinking water for people. Non-metallic materials that satisfy the requirements of BS 6920, are deemed to satisfy the appropriate byelaws requirements.

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LETTERS

(continued)

2. BS 6920 testing parameters are devised to ensure that no adverse effect are caused to people when BS 6920 rated products are in contact with the mains drinking water supply for domestic purposes approval; indicating that a material will not be toxic, cytotoxic, give rise to taste problems or promote microbial growth — where drinking water for people is concerned.
3. **The BS 6920 testing parameters are not devised to certify non-metallic materials for use with mains tapwater when that water is to be sent to fish.**
4. The use of approved WRC Certification applies to 'the manufacture of water fittings for use in contact with water for domestic purposes' and 'does not signify the approval of their mechanical or physical properties for fitness-for-purpose'.
5. You understand that points (3) and (4) are illustrated by the fact that not all manufacturers of purifying media will support the use of some, or all, of their filtration products for the treatment of water for fish, even though they hold Water Research Centre Approval certificates for those particular products for use in contact with drinking water for people. Sound scientific and other evidence is available to support this statement.
6. That if members of the public do not fully understand the use of Water Research Centre logo for a product, or group of products, they can contact your centre so that they can be advised accurately on what WRC Certification means in that particular instance.
7. That the use of the WRC logo by a manufacturer can apply to one part of a purifier only and it does not necessarily validate all claims made by the manufacturer about the complete purifier; manufacturers are urged to quote in their literature the terms which are outlined in the WRC letter of certification of a named component. Finally, and rather importantly
8. You were kind enough to agree that I could send any further appropriate copy to you prior to publication for technical verification — thank you for agreeing to that. Are you sure you want to take on the extra work!

With many thanks for your time and assistance

Mrs. Ann Telford

SPELLCHECKER RULES O.K.?

Further to research into the twisted mind of computer spell-checkers has revealed more haphazard guesses as to the correct interpretations of these (mostly fish-connected) words.

AOS — AMOS
ASAS — Assos (no comment!)
Cichlids — cackled
Corydoras — Corridors
Durrants — Currants
Llantwit (as in Major) comes out as lawn.

Loaches — Lochs
Merry Christmas — Fiery Christmas
Platax — Plateaux
Rolf (as in Hagen) — Wolf!
Siluroides — Cellarets

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F.B.A.S. PUBLICATIONS

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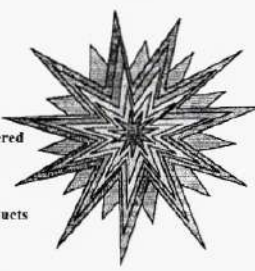
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The Green Guide To ... Breeding Golden Gouramis



by Nora Green, Tameside A.S.

When we bought our Golden Gouramis we didn't have any intention of breeding them. But, as we are such good fishkeepers who keep our fish in ideal conditions, they decided to breed. When we discovered Charles gasping at the top of the tank Hubby said I'd been overfeeding the tank again; then, when he started to blow bubbles we got rather concerned. I'm becoming an expert on fish and know these are Labyrinth fish, even though I don't know what it means.

Charles and Celia are quickly transferred into a 2 foot tank and Hubby and I start to argue. The book says the water should only be 7 inches deep and ours is full to the top. Hubby won't empty any out because, he says, we don't know if they are going to breed!

We have also learned that the top of the tank should be covered with polythene in order to keep the air temperature above the water warm and humid. If it gets too cold, the baby fishes' labyrinth gland will not develop fully and they will drown. This causes yet another argument because I want to cut a piece from a huge sheet of polythene and Hubby won't let me because he wants it for something useful like covering carpets during any future building work! I sulk, and he finds me some that is thinner and more suitable: strange, isn't it? Five minutes previous, we didn't have anything — until I threatened to cut up his good stuff!

Within hours of them settling in their new home, Charles again starts to blow bubbles, building a nest in the weeds. I've spent the last few days reading up on this event so know exactly what to do — the problem is getting Hubby to agree.

It takes a few days to build the nest, after which he struts around the tank showing her how handsome he is before entering her under the nest. As she lays the eggs, he fertilises them,

then gathers them up in his mouth to place inside the bubbles. (We still have a tank full of water, and poor Charles must be exhausted swimming all that way). Eventually Hubby agrees to drop the water level to stop me moaning. In spite of what the books may say, it can be done without damaging the nest! Once the female has completed her task she must be returned to the community tank, leaving the male to guard the nest. If, like Hubby, you have trouble netting fish and break up the nest while chasing her around the tank, make sure you shove all the bubbles back into the corner and they should be alright.

If you watch carefully, you will see little black dots inside the bubbles. Hubby still can't believe they are fish and thinks we've got some sort of infestation in the tank. However, a few days later they start to hatch; this is when you remove the male and start to throw in lots of Liquify, making sure it goes in the centre of the tank (away from the babies) because the drops are bigger than the fish! The Liquify will settle on the bottom in great blobs so you then siphon it out! Being experts, we can now breed our own Brine Shrimp but it wasn't ready when the fish hatched. As soon as the Brine Shrimp hatch out, put plenty into the tank as the baby fish need live food to encourage them to eat. Then the following day siphon up all the dead Brine Shrimp from the bottom of the tank, otherwise they will go all furry and yucky!

It was at this stage I called for help as, no matter how much food I threw into the tank, my babies refused to eat. A Club member informed me that for the first few days the fish live on the yolk sac, after which they need Micro Worms as at this stage they only have tiny mouths — much too small to eat Brine Shrimp. Micro Worms are easy to breed once you get a culture

The Green Guide ...

(continued)

boil some potatoes and mash them (but without adding butter and milk), then put the mash into half Vidalite containers. Unfortunately, I couldn't judge how many potatoes to do and ended up with enough for ten cultures, much to everyone else's amusement. Until the following week that is — for some strange reason, almost everyone at the Club lost their cultures — everyone except me! Boy, did I enjoy supplying all the so-called experts with Micro Worm cultures ...

To get the worms (which appear as a shimmering dusty film on top of the potatoes) into the tank, you need a thin piece of plastic which you place on top of the potatoes and the worms will cling to it. This you then rinse off into the tank and watch the babies feed. I, being heavy handed, would manage to scoop up more potato than worms!

As with any babies, the tank must be kept clean so any waste must be siphoned up daily. As it's inevitable that babies will be sucked up the tube while cleaning, we again get back to the question that's been bothering me — how can we possibly know there won't be any brain damage inflicted on them? Imagine a human baby

going through a pipe in such a way: you would expect it to suffer some sort of brain damage from banging its head on the pipe wouldn't you?

However, for complete idiots, we had quite a good success rate of survivors. One of our females even went on to win a First Prize at our Club (only one other person berched a fish that night!). She was later loaned to another member who had a Prize-winning male but unfortunately, although this person has forgotten more about fish than we are ever likely to learn, she has never mastered the art of conversing with them: therefore young Movis, who is presently winning First Prizes in the Pairs Classes, steadfastly refuses to breed. I suggested that perhaps she didn't fancy the male, so he was replaced and she did begin to show signs of interest in her new partner when her mother died. I did say she must be told gently of the sad news, and was assured she was, however, Movis still refuses to breed. She is still winning lots of Firsts in Shows and, in some cases, competing against fish I take and beating them too!

The problem is she's been away so long she no longer remembers me ...

A Look at Corydoras

Part VI

by John Edwards, East Kent A.S.



As promised in my last article, here I will explain on inducing your Corydoras to spawn. I suggest that the only good months are between November and March, this observation being based on a yearly ritual which had gone on for the past 20 years in my fish house.

You may recall that my results would differ from an indoor tank which had its heat and light controlled to that of my fish house which has its conditions regulated by the weather of the day and time of year, especially the length of daylight. It was the length of daylight which I had figured was the trigger, basing this on the fact that daytime hours are shorter in South America. Half right! I think it is not the length of the daylight hours but what is happening weather-wise.

In the last days of last June, the rest of the country was basking in wall-to-wall sunshine with temperatures into the eighties — but not in my home town of Margate. With a N.E. wind blowing down the cold North Sea we had a fortnight of continuous rain and low temperatures; this combination of heavy cloud cover, low temperatures (50°F) and plenty of rain (for water changes) sent my Corydoras and *Aspidoras* wild. I had spawnings of *Corydoras barbatus*, *C. metae*, *C. nanus*, *C. pygmaeus* and *Aspidoras menersi*. Could the trigger be a sustained period of poor light conditions, low temperatures (65°F-68°F) and frequent changes of water of a lower temperature than that of the tank?

At this point, I had chats with various *Corydoras* breeders that I knew about their set-ups and experiences; strange, they must have thought, surely after all of his breeding successes he would have known why and I thought I did. It does go to show we can draw the wrong conclusions from the evidence at hand.

Like most of you, I found Dick Dove's article on the collection of *Tubifex* most interesting. It was a topic uppermost on my mind when visiting

my local aquatic shop this winter; why were there no *Tubifex* worms for sale? Most shopkeepers just shrugged their shoulders and carried on serving the customers. It had not occurred to them that the *Corydoras* they had sold all through the summer were now going to have a hard time surviving. I can see now why that may be — I would think long and hard before embarking on such a task in December and January! Still, there are alternatives. Have you tried freeze-dried *Tubifex*? You can spend many a happy hour trying to get them somewhere near the bottom of the tank, only to see them slowly rise to the water surface! Oh yes, I did wet them first!

You would have also seen in the last issue of *FishWorld* our new presentation for the 'Centre-fold' featuring *Miss December* — *Corydoras panda*. Funny that the Editor should pick on this particular species. On my last visit to the Mecca of *Corydoras* collectors (Wholesale Tropicals, Bethnal Green Road, London) Terry Jones the owner was proudly showing off one *Corydoras panda* lookalike, one of the many new *Corydoras* that had arrived from Peru. I can remember *Corydoras panda* first coming into a wholesaler's about ten years ago and priced at £25.00, with people making a bee-line to the shop to be the first to own some and be the first to breed them. Now of course *Corydoras panda* has been bred many times and can be picked up for around £2.50.

Well, that ends this particular piece on breeding *Corydoras* and I am sure by now many of you are the proud owners of many little *Corydoras*. I have persuaded the Editor to continue with a more closer look at individual species of *Corydoras* beginning with the *C. barbatus*.

New Contacts at the FBAS

Following the Election of Officers and Council Members at the Annual General Meeting of the Federation of British Aquatic Societies last December there are a couple of important changes which affect Societies.

The new Trophy & Brooch Officer is **Paul Corbett, The Orchard, Gatcombe, Isle of Wight PO23 3EF** who should be contacted in respect of the Championship Class Trophies, Award Brooches and entries for the Supreme Championship (at Weston) and for the British Open (at Corby Open Show).

The FBAS Public Relations Officer is **Alan Benson, 25 Blewitt Cottages, New Road, Rainham, Essex RM13 8SL** who will be pleased to receive enquiries in respect of exhibitions and all matters of publicity likely to benefit or involve the Federation.

Have you tried this?

In this part of Fishworld, we shall be detailing some of the different activities that Societies have come up with to entertain and inform their members and which other societies might care to adapt (or adapt) to suit their own members' requirements.

GUESS WHAT?

This is a drawing contest and guessing game combined based along the lines of TV's Channel 4 game Win, Lose or Draw. It is simple to arrange and can be played by teams of two in a knock-out basis, or in any format that suits the occasion.

Equipment Required

- Two (or more) large flip-over drawing pads, on easels preferably.
- A supply of coloured pens, pencils for each team.
- A library of contemporary fish books (half a dozen will do).

Procedure

Each team decides which person is going to be the one to draw, the other is the guesser. This is for each round but (depending on the first round results, roles can be reversed if so desired).

The Question Master gives each team a subject (usually a fish name) which the 'artist' in each team must illustrate on the pad within a certain time limit (the shorter the time, the more frantic the fun). It is up to the other team member to guess the subject's name correctly. Should the 'artist' not be familiar with the subject name, reference from the books is allowed but marks awarded for correct answer are halved.

Scoring

To be really mean why not have wrong answer, but having referred to the books?

Niceties

Generally, giving both teams the same fish name makes for excellent entertainment as the audience can judge the merits of each team's efforts and, of course, try to work out what the fish is for themselves from two sets of visual clues. Again, it is the organisers' responsibility to choose whether to use common or specific names, as a variation, plant names or even equipment descriptions can be used as subjects.

In the event of difficulty in interpreting the varying degrees of artistic licence likely to be on show (especially when asked to draw under strict time limits), either have an independent arbitrator on hand or let the audience decide! Whether or not to allow 'shorthand' visual clues must be decided right from the start - a quick drawing of a spanner or a cherry for instance might not be thought sportsmanlike when asked to illustrate *Barbus lateristriga* or *Barbus itheya*.

Effort level

The main effort will come before the competition as the list of subjects has to be drawn up and making sure that they are included in the books used for references. It is best to have enough questions pre-planned to.

Credits

We came across this competition at last year's TIAA Show at Tynemouth and thought it was well worthy of a wider exposure in Fishworld for the benefit of all Societies. Please send in your ideas for others to share.

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Don't Waste Water

The following tip was picked up whilst 'Surfing the Net' and comes via courtesy of Bob Goldstein, the cichlid expert in North Carolina. Whether or not it is one of his own tips from long experience I don't know, but marinated everywhere might like to be in on it.

When hatching Brine Shrimp, I use an alternative method which may be of interest to readers. I use waste sea water from water changes, full strength, to hatch the brine shrimp in gallon jars under bright light with vigorous aeration, harvesting at 48 hours; and use large flat containers with lots of overhead light to grow juveniles and adults, also in waste sea

water. This saves salt purchase and preparation time, and provides another use for wastewater prior to discard when really old. When hatching eggs in full strength sea water, I then filter the hatch water through a brine shrimp net and place the washings in a pitcher of cold tap water. Within 15 minutes, the live nauplii sink and eggshells float, and I simply decant the water and wipe the sides to eliminate shells. I refill the container with fresh or marine water for feeding with a baster. If there are lots of brown (unhatched) eggs or shells on the bottom after 15 minutes, I discard, as it means either the eggs or the water was not good.

THE BRITISH CICHLID ASSOCIATION

On Sunday 10th March 1996, The British Cichlid Association will be celebrating their 25th Anniversary Year Convention at Silkcoates School, Silkcoates Lane, Wrenthorpe, Wakefield, West Yorkshire.

Guest Speakers:
AD KONINGS talking on 'Cichlids of Lake Tanganyika'
FRANK WARZEL talking on 'Pike Cichlids'

In addition there will be a strictly-limited 300 lot Auction.

Even if you are not a member do come along and enjoy the day, we are sure you will feel it well worth the effort. For further details of the event (generously sponsored by Animal House (UK) Ltd) please contact: Alan Hill Tel: 0161 797 2311

For more information about the BCA please send a stamped, self-addressed envelope to:

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If you would like a Sample Pack of publications please also include a cheque/Postal Order for £3.00 (payable to British Cichlid Association)

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"Tanks for the Memory"

Everybody these days seems to have a whinge about something or another (like lack of articles, for instance! Ed.) but, as the following article from way back in 1970 shows, we have a lot to be 'thankful' for.

Questionnaire on Protection against Rust

Of the replies to the questionnaire, 50% of people bought standard painted tanks and, of these, 50% used the tanks without additional protective coatings; 17% bought special tanks and the remaining 33% bought special and standard tanks. Of those using 'protected' tanks, the majority used nylon-coated tanks, whilst a stainless steel tank and 2 hot-dipped galvanised tanks were also used. All claimed that these were completely successful in preventing rust, even when glass covers rested directly on the tank frame.

Of those members who applied no additional protective measure to standard tanks, those who were keeping coldwater fish considered protection unnecessary. Of the remaining tropical fishkeepers, half used metal hoods and suffered from rust whilst the rest supported cover-glasses with metal clips and were equally divided into both claiming success and not.

Methods of Supporting Covering-glasses

Among the methods used were standard metal clips attached to the glass, strips of cork, rubber or plastic attached, or glued, to the frame and PVC Insulating Tape stuck to the frame. It is difficult to assess the value of these measures as in most cases protective paint was also used. In one instance, the cover glass was tilted so as to allow condensation to run back into the tank.

Editor's Note: I'm pleased to say that a 4 foot, nylon-coated tank I bought in the early 1960s is still going strong; the only treatment it has received has been a precautionary 'seal' with silicone sealant when I moved it over 10 years ago. Are there any more Melhuselich items of equipment still going strong out there?

The above item is reprinted from the *Journal of the British Aquarists Study Society*, January 1970.

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Protective Treatments

Successful methods are listed here, the failures are not!

1. Frame sand-blasted — zinc-sprayed mordant. — One undercoat and two top coats of INESTOL rubberised paint.
2. Rub down to metal, apply 'GALVAFROID', followed by glass paint.
3. One coat of 'GALVAFROID' followed by two coats synthetic undercoat and one coat marine-quality synthetic Coach Enamel.
4. Red oxide primer, one coat zinc-bearing protective paint, followed by two coats Aluminium aerosol.
5. Unpainted frames treated with 'JENOLITE' and painted with three coats of 'TENSULAC' No. 7 or No. 8.

Conclusions

Rusting occurs more rapidly in untreated tanks in which the water temperature is higher than that of the surrounding atmosphere. Nevertheless, such tanks will last for many years and the fish do not appear to be adversely affected. Nylon-coated, stainless steel and galvanised tanks are highly resistant to rusting. Some protective treatments are successful and these have been detailed above.

With untreated tanks, the use of a glass cover, supported in such a way that it does not come into contact with (or dip upon) the metal frame is recommended.

Coxilhubbia stuarti (Aoson & Bailey).

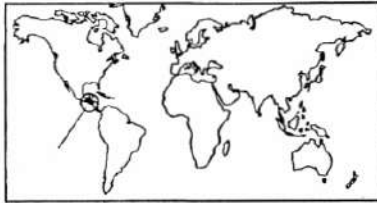


Common Name: Stuarta Livebearer.

Colour: Basic body colour olive green shading greenish brown towards the dorsal contour, lighter towards the belly, belly silvery white, approximately 8 to 15 black bars are present on the body. A black line runs from the gonopodium along the anal contour and terminates at the base of the caudal fin. Fins yellowish, dorsal with black rays and margin, gonopodium with black rays.

Characteristics: The above illustration and description applies to males in breeding condition, males at other times and females display a less intense colouration.

Remarks: This species is quite hardy and nervous as a good community inhabitant if kept with fish of approximately their own size. Exhibit in show class T.



Habitat: The Rio Polochic and Lake Izabal, Guatemala, present in slow moving, deepish, cloudy warm water where the substrate is loamy.

Temperature: 25°-27°C (77°-81°F).

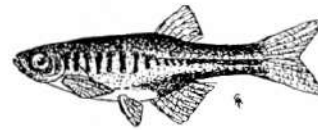
Water: PH 6.8 - 7.2 Not critical, around neutral would be ideal.

Feeding: All types of food taken but as with the majority of livebearers green vegetable food should be offered occasionally.

Breeding: This should be carried out in a well planted single species aquarium with floating plant cover, where the young can hide from the parents, or ready to spawn females may be placed in hanging breeding cages where the newly born fry can avoid being eaten. The adults and fry should be separated after spawning is completed. The young fish will eat soon after spawning, taking brine shrimp, micro worm and fine dried foods. Gestation period four weeks.

Comment: *Carlihubbsi stuarti* is similar in shape to *Phallichthys amates amates* and *Phallichthys fairweatheri* but is in fact a much harder species.

Brachydanio shanensis (Hora).

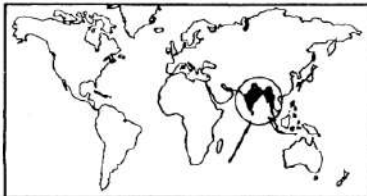


Common Name:

Colour: Basic body colour generally olivaceous shading darker towards the dorsal contour, lighter on the belly, a broad dark lateral band commences behind the operculum narrowing posteriorly till terminating on the caudal peduncle, with age the bar breaks up anteriorly into a number of vertical bars with the intervening spaces becoming silvery. Along the dorsal contour a black streak is present. The scales on the upper half of the body sometimes exhibit black dots along their edges. All fins clear without markings. Colouration in the very young specimens is wholly silver.

Characteristics: Body and fin shape as illustrated, it should be noted that the insert of the dorsal fin is slightly to the rear of the anal, and that the posterior ray of both the dorsal and anal fins are separate both being split at the base of its respective fin, the lateral line is incomplete, commencing near the top of the operculum it turns abruptly towards the ventral contour, continuing on the lower half of the body stopping before the caudal peduncle. Barbels normally absent although some specimens display a short stumpy pair at the corners of the mouth.

Remarks: A small species ideal for the community aquarium which makes it a pity that it is not readily available to aquarists. Exhibit in show class K.



Habitat: Burma, India and Thailand in hill streams, ditches, pools and rice fields in clear slightly acid to neutral water.

Temperature: 22°-25°C (72°-77°F).

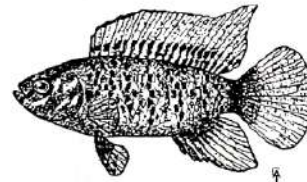
Water: PH 6.8 - 7. Clear slightly acid, hardness not critical.

Feeding: *Brachydanio shanensis* will accept all food, an effort being made to occasionally provide live food will be appreciated.

Breeding: The breeding pattern of this species is not known to us but it is expected to follow that outlined in the text of *Brachydanio abolineatus*.

Comment: Named after the Shan States of Burma.

Badia badia (Hamilton-Buchanan).

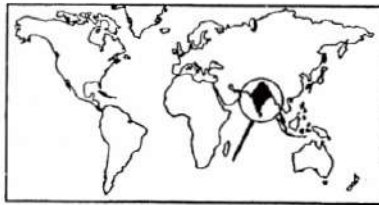


Common Names: Badia or Chameleon Fish.

Colour: Basic body colour is variable as befits an individual with the common name of Chameleon fish, which can alter colour within a few minutes through the whole spectrum, dark marking may be present on the scales forming irregular blue-black bars, these are normally present on juveniles, infrequently seen on mature fish, a black bar runs obliquely from the snout to the insert of the dorsal fin and a small black blotch is sometimes present behind the operculum. Fins yellowish green or bluish, the dorsal frequently displaying red or green lines at the base and a red, black or white margin on its anterior hard rays, caudal, anal and pelvics deeply coloured at their base, pectorals without markings.

Characteristics: Females are less well coloured than the males and have rounded extremities to the dorsal and anal fins. Their ventral contour is convex unlike the male who as illustrated is inclined to be concave.

Remarks: *Badia badia* is peaceful if kept in a community aquarium but is shy and tends to hide. If not kept well fed it may eat small fishes, conversely unfortunately when kept with its own kind in a one species tank it is inclined to be quarrelsome. Exhibit in show class M.



Habitat: India where it is widely distributed in standing fresh water.

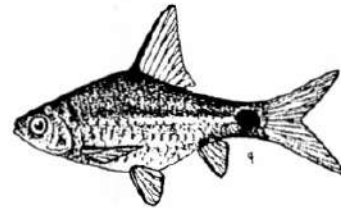
Temperature: 18°-27°C (64°-81°F).

Water: PH 7 - 7.2 Neutral to alkaline, slightly hard.

Feeding: Live food only is taken, although it is possible with patience to get frozen food accepted, dried foods seem to be totally ignored.

Breeding: The spawning tank need not be large, one of 400mm x 200mm x 200mm would be satisfactory. Filled with water at a temperature of 26-27°C (79-81°F) with a PH value of 7 - 7.2. It should be thickly planted with hiding places. A scrubbed clay flower pot of about 100mm diameter, with the base hole enlarged to 25mm should be placed on its side with the larger end facing the front. The male scrupulously cleans the spot where he wishes the female to lay her eggs, be it a leaf, rock or the inside or outside of the flower pot so thoughtfully provided. He then entices the female to lay her eggs at his chosen spot, he fertilizes the eggs which hatch in 2 or 3 days.

Barbus punjabensis (Day).

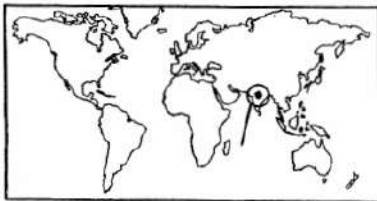


Common Name: The Punjab Barb.

Colour: Basic body colour silver with a hint of light brown above the centre line of the body, shading darker towards the dorsal contour where it becomes dark brownish black, the lower portion of the body shades to silver white on the belly, a shining bluish metallic silver stripe becomes increasingly intense from below the insertion of the dorsal fin until terminating on the caudal peduncle at a prominent black blotch, a narrow dark area lies adjacent to the upper edge of the silver stripe, a further black spot is present on the anal contour at the base of the anal fin, and a smallish dark area is sometimes displayed at the base of the dorsal spine, top of head dark brown. Fins clear, dorsal spine and anterior soft ray black, all other fins without markings.

Characteristics: Body and finnage shape as illustrated caudal deeply forked with pointed lobes, the eye is large and no barbels are present. Females are more rounded and have a greater depth of body.

Remarks: A small fish, active and ideal for communities of fish approximately its own size, (50mm standard length). Exhibited in show class Bz.



Habitat: The Punjab and Jabalpur, India. The Ravi River, Lahore, Pakistan. A river dweller that prefers the shaded quiet waters near the river bank.

Temperature: 22° - 28° C (72° - 79°F)

Water: P.H. 7. But slightly acid or alkaline is tolerated.

Feeding: The adults are omnivorous, eagerly devouring most types of live and dried food.

Breeding: As is usual with most members of the genus the eggs are broadcast among fine leaved plants such as Myriophyllum or If plants are unavailable dymel or nylon wool may be used as substitute, after spawning the adults should be removed otherwise they will feast on the eggs leaving few to hatch into fry, hatching takes place within twenty four to forty eight hours, when the minute fry will cling to the spawning medium and the sides of the aquarium until they become free swimming on the third or fourth day, when they should be offered infusoria and thereafter brine shrimp, micro worm and a small amount of powdered dry food.

Comment: Barbus punjabensis has been incorrectly named as Barbus fraseri, Barbus fraseri and Barbus fraseri, although it is quite possible that the last two are merely misspellings of Barbus fraseri. So it should be noted that these be considered synonyms of Barbus punjabensis and therefore invalid and should not be used.

HAVE YOU READ?

WHAT SHOULD I DO? — A Practical Guide for the Freshwater Fish Farmer
by H.J. Schlotfeldt and D.J. Alderman (with others)

Although this book is a fish disease Guide dealing largely with carp and trout, it will prove extremely informative for the serious pondkeeper who maintains Koi, Goldfish and other coldwater ornamentals.

This 60 page guide offers authoritative and up-to-date practical advice, which can be readily understood by the layman, and is conveniently divided into 50 sections for easy access to information. Most of the sections each deal with a specific disease, with information presented under sub-headings — pathogen/causative organism; temperature at outbreak; clinical signs; mortality rate; diagnosis; transmission; prevention. A final sub-heading aptly entitled 'What should I do?' offers sound advice on how to tackle the disease problem. The remaining main sections cover general topics such as hygiene, disinfectants and water parameters. Section 43 provides a useful list of important pathogens associated with coldwater ornamentals (principally cyprinids) plus some of the common environmental causes of disease in these species.

The Guide is lavishly-illustrated with over 100 glossy colour photographs designed to aid disease identification; sections are well presented and the text clear and easy to follow. Certain parts will be of limited interest to the ornamental fish hobbyists, notably those sections dealing with salmonid diseases (although certain salmonid pathogens can also infect other groups of fish). Nevertheless, the Guide reveals an insight into some of the major health problems associated with coldwater fish culture in Europe, together with EC regulations concerning notifiable diseases and movements of livestock. Having read these sections it becomes clear why important regulations are necessary for coldwater ornamentals.

The Guide is not intended for the aquarium hobbyists although it does cover several infectious diseases of tropical and coldwater aquarium fishes, for example, Whitespot, *Trichodina*, Flukes and *Saprolegnia*. Certain recommended procedures, treatments and water quality parameters may not be applicable to all species of ornamental fish and, in this respect, some of the practical advice must be interpreted with care. Partly for this reason, the Guide could not be recommended for the beginner.

This is an excellent Guidebook which is good value for money and a pleasure to read. I would recommend it to anyone who is professionally involved with coldwater ornamental as well as to the advanced amateur. It is available, price £9.00 from: EAFP General Secretary, D.W. Bruno, SOAEFD Marine Laboratory, Victoria Road, Aberdeen, Scotland AB9 8DB. Please note: Full payment must be sent with the order (cheques payable to EAFP).
Dr. Peter Burgess

THE TROPICAL MARINE FISH SURVIVAL MANUAL
by Gordon Kay (Ringpress Books £15.99)

Gordon Kay's name will be familiar to marine fishkeepers as he is a regular contributor on marines to the aquatic press; as a consequence his advice can be taken as coming from someone who has many years of practical experience.

Although produced in the typical 'how to' format, the author has managed to come up with something not seen in other books — a 'question and answer' panel accompanying most of the species pages containing the answers to many of the problems associated, perhaps, only with that particular species and what better place to look for it?

HAVE YOU READ?

(continued)

Extremely attractive to look at, with stunning photographs by some of the best lensmen around, the book also has lots of practical information too. The book simply 'tells it as it is' in language that is easy to understand and with illustrations that are clearly personified. The balance is 25%: 75% between setting up the marine aquarium, its care and management and the description of some 109 different species (from 33 Families) of fish is just about right. You're not kept waiting too long before the fish appear and any troubles you may encounter are sensibly left until after you've enjoyed the selection of species. Although invertebrates may be mentioned in passing (typically whether they are compatible or not with any fish species under consideration), there is no special chapter set aside for them. Similarly, whilst exotic species of fish are mentioned, they are done so as a warning NOT to keep them, either because of specialised feeding problems or from a conservation viewpoint. As Gordon points out, the world is getting smaller so fast that it's not much more expensive to book a holiday and see the fish in their own environment!

They say never judge a book by its cover and I beg you to follow this advice. With one or two misprints and one upside down picture to 'encourage' you on the dustjacket, experienced mariners might well be tempted to give this book a miss which would be a pity, for they would be denying themselves not only a good read but also lots of practical information too.

If you are thinking of keeping marine fishes, this book will lead you along a very safe path to success; you won't be puzzled by techno-speak and the very openness of the layout makes it easy reading.

Dick Mills

THE ULTIMATE AQUARIUM

by Mary Bailey & Gina Sandford (Lorenz Books £16.95)

They say that putting two ladies together in a kitchen to produce something is a recipe for disaster, so what's the outcome when two lady fishkeepers get together to produce a book? In short, a feast of information.

The book is big, running to some 250 plus pages and comes in two distinct halves: the setting up the aquarium stage and then what fish to put in it. Although this is the traditional approach, Mary and Gina have put the usual ingredients together in a new way. Whilst newcomers to aquarium-keeping are advised into the correct sequence of events, there will be no punches pulled and one feels that aquatic foals will not be suffered gladly but then, as the authors point out, one might as well learn the proper way from the start than try to alter one's ways later — often when it'll probably be too late, as far as the fishes are concerned.

For explaining what is needed (and how to do it) the first half of the book comes across with full colours flying; from the discussion of the variability of conditions of natural waters (and how to provide similar conditions in the aquarium) and the working of the necessary hardware to diagrams of equipment and 'sequence shots' of installing the various pieces together, nothing is left unexplained or unprovided. Similarly, the purchasing introduction, feeding and health care of the fishes themselves are minutely-examined and, again, in no uncertain way, is the newcomer left in any doubt what to expect and where his (or her) fishkeeping responsibilities lay.

The second half of the book covers the fishes themselves. Here, rather than itemise each species chosen (and repeat information common to most) the authors have settled in the 'block description' approach and talk of groups, or families, of fishes instead. Fishes are assembled in their popular (and familiar-to-fishkeepers) groups with Miscellaneous Freshwater, Brackish Water and Marine species bringing up the rear. The big head-to-head comes, of course when Mary and Gina take on their own respective favourite subjects — cichlids and catfish respectively — is there a battle for supremacy on the page count? Of course not, although Gina does have one more page than Mary, who even up the honours by having her selection ahead of Gina's!

HAVE YOU READ?

(continued)

Excellent produced in visual terms, the book contains all you need to know. One or two things brought me up short though: why does the pH chart run from high values (9) on the left to low values (5) on the right? (It just seemed wrong to read them in that sequence, maybe left-handed people won't feel that way!) The instructions to fitting electrical items (with or without a Cable Tidy) seemed a bit imprecise and care must always be taken in this area — DO SEEK QUALIFIED HELP. The Glossary contained one or two unfamiliar words, which may indicate it was added as an after-thought by production staff and not by the authors. All minor details really and, on balance, the rest of the book's excellence outweighs such tiny irritations. Dick Mills

Some Reflections of an Old, Very Tired, Aquarist

(but I've still got my good looks) by Wart Ellery

In the late 1950's and early 1960's, I was actively pursuing interests such as cricket, Humphrey Lyttelton, Jayne Mansfield and a battered old BSA Bantam (though not necessarily in that order). Through a friend of mine I got interested (for the kids' sake, you understand) in fishkeeping.

I remember my first tank, a three footer with a slate bottom. You see, in the early days of our hobby there wasn't much technology about: internal heaters, with or without a thermostat were well into the future. To keep the water warm you had a little gas-fired Bunsen burner placed under the tank with the flame playing on the slate bottom - unlike glass the slate didn't crack with the heat. Sometimes you tried a couple of candles instead but these were not quite so reliable as they blew out.

Also, of course, pumps were non-existent too, or at the very least, very expensive and noisy - you would keep your neighbours awake and plates and cutlery would vibrate in the adjacent rooms! As for aeration, you used to use a car inner tube (yes, even tubless tyres were yet to come), pump it up and lay it near the tank with a piece of thin pipe leading into the aquarium to aerate the water. It worked quite well except you had to remember to pump it up fairly frequently (sometimes it burst, much to the consternation of the fish!). This type of set up did not foster ideal relationships with the wife (or her mother).

Do you remember the old advert 'I've got Millions!?' This appeared continuously for years in the national fish publications and periodicals. It belonged to a Mr Arnold, who was a member of the East London Society, and it referred to his business - 'Worms'. His whole garden (and most of his house in warm weather) was geared to the production of all types of worms. He had the only moving garden in the East End!

And what about Shows? Well I got hooked on those too, and so did my family, particularly my son. We used to get about a bit in relative comfort - we had sold the Bantam and bought a three-wheeler with the clutch gone! Kings Lynn is about 100 miles away (in the three-wheeler it seemed more like 150) from where I live and it meant an early start to get to the Open Show on time. We slugged up to the Lyn on a cold wet morning and had a good day. I remember it well because we won our first Trophy that day and I was elated, so much so that it didn't till I was nearly home I realised I was on my own - I'd left them all behind! Still, it was a nice quiet drive home. Ah, those were the days... I bet there are others with equally vivid memories of the pioneering days of fishkeeping and showing; I wouldn't mind reading about them and I bet you wouldn't either. (You'll have to lay it on thicker than that Mr Ellery, our readers aren't very susceptible to subtle hints - Ed).

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Fish and Chips

Some of the ever-increasing number of CD-ROM edutainments on the computer software market is leaning towards aquatic subjects. Most CD-ROM titles that feature underwater pictures have been presented as 'screen-savers' which, attractive as they are, do not demand much interaction from the viewer. Then there are the encyclopedic, databases of underwater animals that have still and some video action. However, these programmes are different, for you play an interactive part.

Ode! Under the Ocean
Format: CD-ROM for PC (Windows) and Macintosh £19.99
(Iona Software, 16 St. Albans Road, Kingston-upon-Thames, Surrey KT2 5HQ Tel: (0181) 295 9454)

You become a fish and basically you have to survive. Being on the reef means being part of the universal food chain, so it's a case of 'eat before you're eaten'. You have to learn what to eat, where to go (or not), recognise a friendly fish (Cleaner fish) or foe (Shark!) and so on. You can take on the identity of over 50 species of fish and 'live' at four levels: PRACTICE - acclimatise yourself to life on the reef and flex your fins, so to speak; CHALLENGE - you're in a team of four fish (guess who's the smallest?) and work your way up to become a larger fish as points mount. At the top you become a REEF RULER, then start a new challenge with an entirely new group of fishes. TOURNAMENT - work your way right through the whole range of fishes until you become the Great White Shark. CREATE-A-FISH - design yourself - speed, endurance, agility, size, colours and special abilities (electric sting, ink projection, inflation etc) can all be selected. Each game gives you the reef to swim about on: a double check-scale indicates your health and energy levels (low health - find a Cleaner Fish fast! Energy low - eat something). Hiding behind corals or in caves is permitted to escape

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predators. An information box reveals facts about plants and animals and the day/night indicator provides suitably appropriate fish. An optional dialogue box informs you of the result of any action you take (poisonous, inedible and suitable foods) - and also your fate should you fail to outrun a hungry Shark!

The programme also offers comprehensive database information on three categories - Fish, Corals and Sponges and Other Sea Life - providing common and scientific names together with notes on each species' importance, and relationship to, underwater life. Be warned, should you start 'sidetracking' into these information zones, you'll never get into the game of living 'Down Under'.

Sharks! Format: CD-ROM for PC (Astrion pic, 142 Great north Way, Hendon, London NW4 1EG Tel: (0181) 202 0011)

The safest way to learn all there is to know about Sharks. The opening sequence is dramatic - but soon a reassuring female voice-over guides you into the welcoming observation chamber where you are in complete control of where you go next. There are no less than seven options: Video Gallery, About Sharks, The Shark Body, A shark's Life, People and Sharks, Ask the Expert and Shark Tag. In addition there are other features such as Help, More, Search and, eventually, Exit.

The Video Gallery lets you view movies entitled What is a Shark?, Connoisseurs of the Deep, Are Sharks Dangerous?, Extrasensory perceptions, JAWS: Then and Now, Meet the Shark, The Great White and Why Study Sharks? Whilst watching the video, in part-screen display is accompanied by a visual transcript of the commentary with highlighted words that can be defined direct from the Glossary; full-screen presentation is also possible.

Seven sections comprise 'About Sharks', twelve in 'The Shark Body', four in 'A Shark's Life' and five in

Fish and Chips

(continued)

People and Sharks'. Each of these main subjects have an additional section called Common Questions too. Functional tool buttons enable saving text to Clipboard or printing articles or transcripts to paper; Related Topics guide you to other items on the same topic whilst Search gives an alphabetic list of topics and keywords on the CD. If you feel disorientated, Log gives you a list of where you've been since leaving the Main Menu and Back will take you to a previous sub-menu. Ask the Experts lets you hear four top Shark experts respond to some of the hard-to-answer Shark questions.

The Shark Tag game is a nice relaxation: simply select a level of play, choose a category and match Shark 'parts' to their appropriate counterparts. A comprehensive Shark Resources provides details and addresses of Books, Magazines, Government Agencies and Shark-related organisations. Go into the water the safe, CD-ROM way and you'll have nothing to fear - just plenty to learn!

Seashore Life Format: CD-ROM for PC (Windows) Macintosh and Acorn. £39.99 plus VAT (Anglia Multimedia, Anglia House, Norwich NR1 3JG Tel: 01603 615151)

Answering children's questions is never an easy proposition, even more so when they've found something on the seashore and want you to identify it! Now, all you have to do is sit them down in front of the home computer and run Anglia's Seashore Life CD ROM programme.

HELP REQUIRED!

We have had a call for help, in respect of back-numbers of Fishworld - they're obviously becoming collector's items!

If anyone has a copy of the following issues - June 1991, December 1991 and September 1992 and can bear parting with please contact: Phil Davis, 111 Arkwright, Harlow, Essex, RM20 3LY 01277 443754

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GROCKLEMANIA '96

(SPONSORED BY ROLF C. HAGEN)



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Important Note:
These details supersede those published in
FishWorld December 1995

"Fuzz Brake — Land where (Peter?) Furze is Growing"

by Sue Crew, Isle of Wight A.S.

'Ere nipper. Where'dee think I bin over weekend? Dane "Grocklemania", you. We 'ad a gert good time. Friday, the Oil o' Wight nippers picked up them Grockles off the fair (ferry) 'n took 'em done Sandown to zum posh 'otel. T'weren't no fear o' gettin' shrammed, you. T'were a real scorcher of a day 'n most of 'em ended up in that there pool they 'ad. Everyone got a gert welcome pack with certificates 'n stuff in it when they got there.

When them grockles 'd 'ad their nammet, nipper Stevens from Eastleigh give us a gert disco 'e calls the "FBAS Roadshow Disco". 'E were good, mayet. 'E 'ad all sorts o' fancy music. Even wold Jack Stillwell from o'er Pampy did a couple o' turns round the floor — 'n 'e don't 'alf move it 'n 'e warts!

We all got some right slick 'til we entered that there "Thomas Crapper" lark. 'Cor, did we 'ave a laugh, though, you. There weren't none o' them there new fangled space 'opper gadgets — it were all about gettin' the wold grey matter o' buzzin'. Only good wold fashioned fun.

We did 'ave "Grockle me Bluff", which were just like wold Frank Muir's telly programme. "Call my Bluff". The words they were on about was all Oil o' Wight dialect. They got three nippers up front 'n they all lied through themmers teeth! Wasn't nothin' you could choose a'tween any of 'em. They did yappul zommat cruel, you.

Wold Peter Furze, wold F.B.A.S. Chairman, 'e 'ad a right chuckle when they asked us to spy which was the true definition of "fuzz brake". 'Parently it's ... a place where furze grows ...'. It were obvious wold Peter thought 'e was bin' set up for zommat. 'I were true, though — it is a place where furze grows, but not Peter!

Later on we did zommat they called "Somethin' Completely Different". T'was charades, you. Them Erith nippers 'n one o' them there Southend nippers got together in a team 'n really got lit up. They were pretty to watch. Got 56 points, they did. 'Twere near dawn when nipper Stevens packed up. Cor, what a night!

Saturday, everone went out round the Island — they even fitted in a fish shop or two.

Come evenin' we were all tuckered out. We did 'ave our nammet 'n we were rarin' to go again. A poacher must've come to the hotel 'cos we 'ad fresh salmon. But wold squire didn't know, you. Then we 'ad the "Generation Gap" 'n Jack really give it some slick. 'e were frolickin' about with a gert tamourine. Reckon 'e might be in trainin' for the Sally Ann's — 'e's got a real rifty action when 'e gets goin'.

Then we 'ad more "Thomas Crapper". More teams joined in the "Crapper Challenge". They nippers 'r always nickin' from other folks. This time it w as Magnus Magnusson 'n "Mastermind", them Oil o' Wight nippers called theirs "Grocklebrain". The questions weren't that academic, though. They were about sport, famous people, nature, places, history 'n fishkeepin' personalities. Here's just a couple to get you goin':

Q. What d'you find on beaches wrapped round nubile bodies?

A. Steve La Thong

Q. What F.B.A.S. Council member always buys on tick?

A. Joe Never-Neversell

There was a raffle too, with booze for prizes. Then they 'ad a gert draw for the Open Show postal entries. Brian Holyoak from down Salisbury was a gert powerhead.

'E 'ad a right good laugh, mayet. A'fore we quealed in (went to bed), the

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Fuzz Brake

(continued)

points was added up and them Erith nippers won 'ands' down. Young Andy's mum ain't too pleased about 'im 'avin' the trophy in 'er tron parlour we've 'eard. 'Parently, she weren't too chuffed about a varnished toilet seat bein' on the piano, even if Andy does say it's a gert trophy.

On Sunday the business end of the weekend took off when dozens of nippers arrived by that gert 'overcraft with their fish in littl tanks 'n buckets — weird, you. IWAS nippers picked 'em up in their motors 'n took 'em to Sandown for free.

Wold Dr David Sands from Aquarian ('e's a PhD, not a quack) did cackle on about fish in 'is lectures 'n talks said 'e talked a treat on biotope aquaria. Trouble is with 'im 'e got ants in 'is pants, you — keeps goin' off yonder exploring 'n catchin' them there fish, you. 'E goes right over the water, mayet. Later on 'e was the governor when they 'ad that Aquarian Aquadub Quiz 'Fined between Southend, Leigh and District A.S. 'n Deal A.S. It were a real needle match, you, but them nippers from Southend finally won.

There were specialist questions on Corys, fish terminology, Killis, Koi 'n Danios 'n the usual general knowledge questions.

Them there judges worked like good 'uns 'n got the fish judged in a trice. Thank 'ee kindly to all on you. We know you either loves 'em or 'ates 'em dependin' on whether your fish wins, but they works 'ard and deserves thanks from the 'obby. After all, without 'em we couldn't 'ave shows, could we?

There was a gert auction — somethin' new to "Grocklemania" but it were good. You could 'ave bought everythin' from a tank setup to the fish to put in it. They didn't 'ave no water, though, probably because they's all on water meters.

IWAS 'ad a gert stand where they was sellin' a load of gear they'd produced. They 'ad gert pictures of fish, table mats 'n stuff, they'd made. They 'ope other clubs 'll want to buy 'em for prizes at their shows.

The FBAS Open Show Stand was also there 'n they were doin' a rarin' trade in free advice 'n sellin' books 'n the like.

Dave Sands presented the Aquarian Aquadub Quiz final trophy to Southend, Leigh and District A.S. Well done to both teams. Them nippers really 'ad to sweat at times. They worked 'ard, you. The Oil o' Wight give Dave Sands a gert set of table mats with Cory's on 'em they'd specially made for him.

Wold Peter Furze presented all the other prizes to people who 'ad won place cards with their fish. He did get a bit 'et up when 'e 'ad to give 'imself a gert prize, though. 'E didn't know whether 'e was a-comin' or a-goin'. 'E also gave a gert bouquet to Margaret Logan, the IWAS Secretary. Apart from bein' Secretary, she does the canteen at every meetin' 'n does it all on 'er own. She always helps other people out if she can 'n is a really good all round club member.

The most notable winners of the Open Show were:

- ★ John Hill - Salisbury - Class De (Championship Class & Best in Show)
- Aulonacara steveni*
- ★ Chris Weire — Eastleigh — Class S (Best Class O-S)
- Pocilia gilli*
- ★ Roger Crew — IOW — Class W (Best Coldwater)
- Rhodeus tabira*
- ★ Roger Crew — IOW — Class Xb-m (Championship Class)
- Corydoras aeneus*
- ★ Sue Crew — ICW — Class Xo-1 (Best Breeders Team)
- Fluixipennis vittata*

P.S. "Grocklemania '96" is goin' to be bigger 'n better
P.P.S. If you haven't already worked it out, Grockles are what we islanders affectionately (?) call visitors.

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Cap This!

Recently, FishWorld Editor Dick Mills and J & S Secretary Bob Esson were invited to form the "brains" of a Brains

frust type evening at Gloucestershire A.S.

Having duly broved the foggy M40 and A40 (and regained their composure with a little liquid refreshment) it was time for the questions. One concerned a Redcap Oranda, whose red cap was progressively fading from the middle outwards. Over to you Bob!

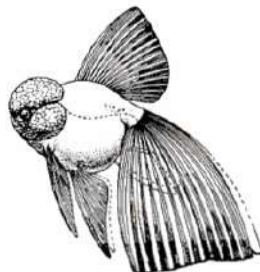
After a few minutes of discussion on colour production in goldfish (and fading body colours in general), the conclusion was that if there was an explanation Bob hadn't come across it nor had he experienced this phenomenon before.

The following day, Dick happened to mention this 'melody' to Alex Stephenson (the Coldwater 'Question & Answer' expert on the Aquarist & Pondkeeper magazine) who said that it was quite a common occurrence in Redcap Orandas over the age of three years. However, the plot thickens.

Subsequently, Bob raises the question at the recent Goldfish Society meeting and unearthed even more information. Apparently, it's all a matter of when the colour change occurs in this particular variety of Fancy Goldfish.

The fish that colour up first are those that lose the redcap first, whilst those that take their time to colour up will retain this distinctive feature. Now comes the crunch — guess which fish the breeder would normally keep and which ones would normally be culled? Quite right! The early coloured ones get kept whilst the late developers are thrown away. It's little comfort after patiently growing on fish for three years or so to learn not only have you fish whose colouration may well fade away quite soon but that you have already thrown away the better quality ones years ago! Not so much a question of red caps, but red faces!

ORANDA



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Wally, Win (and Buster) to the rescue!

Last summer was one to remember with its long hot days but it did have its drawbacks, one of which was the discomfort felt not only by the humans but coldwater fishes, who often found themselves in oxygen-depleted conditions. Wally Ryder, of Portsmouth A.S. found a novel way to deal with these conditions and bring comfort to his fish. Read on, but wait for the revelation at the end.....

Arriving downstairs one morning last summer I noticed a Minnow upside-down in the living room tank. On closer inspection, all the fish seemed to be on their last legs but they all revived after a third of the water had been changed - late for work that morning! It was a 48" x 15" x 15" tank with 10 fish in it; the Minnows (three in number) had grown up in the tank and were 6 years old. The cause of the trouble was the hot weather, the tank did not cool down much during the night and, of course, the plants 'reverse' their living processes in the dark so the water was very short of oxygen by the morning. No filtration or aeration had ever been used in this tank.

The following morning they were in trouble again, so I gave Win (my sister) a call, ably assisted by our dog Buster, and she got up and changed the water while I went off to work. Well, this state of affairs couldn't go on for long. If it had been one of the tanks outside, a hose would have been put in and the tank given a good flush out for a while, but that wouldn't have been too popular in the living room, so a more permanent solution had to be set up.

Most of our houses had a cellar (or a space of about 3ft or more under the floorboards) and this is usually the coolest place in summer - an ideal place for a reservoir of

water so a plastic 5 gallons can was used to make one, with 3/8" holes drilled in the cap and two pieces of rigid plastic (one long, one short) glued in. Next two holes were drilled in the floor (out of sight behind the tank stand). An old, deep, outside filter box was fitted at one end of the tank, with no filter medium, and a hole drilled through the bottom. (A clean polythene squeeze bottle with the top off and a hole drilled through the bottom could also be used). Another piece of short, rigid plastic was glued into the box. This tube was connected to the short tube in the reservoir by a long piece of plastic tubing whilst another piece (from the long tube in the reservoir) came up to the other end of the tank and ended about 3 inches above the bottom. Sucking on the connecting tube (to the short piece at the bottom of the filter box) 'primed' the system (fill the reservoir first or else you'll have a proportion of the tank's contents under the floor) and you'll find that the water levels off into the tank and the filter box automatically.

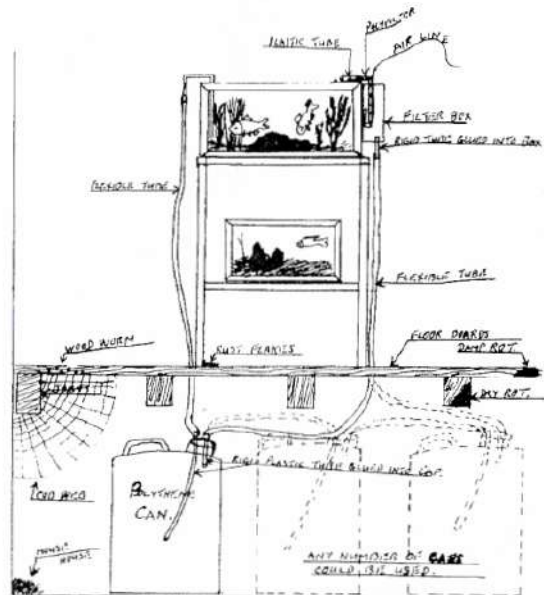
An airlift circulates the water from the filter box into the tank (I used an old polyfilter without the sponge) an inexpensive pump will do - it doesn't have to do much work. The end of the return tube was cut back and a piece of tube pushed on so that the water splashed along the surface.

Besides curing the warm water problem, the fish lived in a larger volume of water; any number of reservoirs could be used, and they also act as a form of settling the tank (without live food, such as Daphnia, of course). This system could also be used to 'extend' a tropical tank (with insulation of course round the reservoirs), after all, it has been said that the volume of water is more than important that the size of the tank the fish live in, and I'm sure this is right.

reprinted from the *Journal of the British Aquarists Study Society*, September 1972.
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WALLY, WIN (and Buster)

(continued)



All Furnished Aquaria were sponsored and set up by Peter Perfold of WaterVogue



Detail of Furnished Aquaria



Space-age filter



Interpat Best Trade Show



Supreme Championship Finalists

aquarian
ADVISORY SERVICE

by Dr. David Ford
Senior Consultant

aquarian
ADVISORY SERVICE

Q. I have a 45 gallon tank in which I am trying to breed Clown Loaches. Of the twelve I have, six are around the 4 1/2 inch length, five more at 5 1/2 inches and one at 8 1/2 inches. I use both internal and external power filters and a home-made trickle filter. The water qualities are as follows:

Nitrite = 0
Nitrate = 30 mg/litre
Ammonia = 0.1 mg/litre
GH = 3.5
KH = 5
pH = 7.2-7.4
Copper = 0
Phosphate = 3.0 ppm

I do not have an undergravel filter. I carry out water changes of 20% per week (new water at 82°F and buffered at pH 7.2 the same as the tank, dechlorinated and with one teaspoonful of salt per 5 gallons).

At present I have a disease in my tank which I am sure is Black Spot. Three of my Clowns are thin (especially above the eyes) and whilst they feed they don't seem to put on any weight; some flick against the gravel from time to time. I love my Clown Loaches and try to meet their requirements exactly, but I am becoming a little frustrated with my efforts.
A. W. West Midlands

A. Clown Loaches are not easy fishes to breed - for a start they are very susceptible to nitrites, and 30mg/l may not be low enough. Try one of the denitrifying treatments (Interpat do one) or increase rainwater content to dilute the level. A consequence of nitrate irritation is a tendency to develop White and Black Spot so improving the water quality may cure that problem better than chemotherapy. Incidentally, Clown Loaches are also more intolerant to 'remedies' than most other popular tropicals and it may be that they are not too keen on your salt additions either.

The spawning problem is due to the fact that the fish breed in the wild in the rainy seasons of Indonesia, Sumatra and Borneo. The fish pair in fast-flowing spring-fed streams and the fry are swept in slower waters where they settle to feed on plankton. Note that this Salmon-type behaviour only occurs when the fish are mature (third year) so a shoal of young fish will breed anyway.

Females are fatter and have smaller rounder tails so make sure the sexes are balanced and the fish are at least three years old. Then try cascading freshwater into the tank and have a good water flow from the filter system (as you state this must not be an ulg type). It may help to do the cascading at night, since most *Botias* are actually nocturnal fish, although *B. macracanthus* is more active than most *Botias* in the daytime.

Q. I have a community tank (48" x 21" x 15") containing five *Pangasius sutchi* (2 x 6", 3 x 2 1/2"), two 3" Baia Shark, three 2" Clown Loaches, four 3" Giant Danios, one 3" Angelfish, two 3" Golden Gouramis, and one 5" *Synodontis ocellifer*. The water is 7.2pH, 79° Hardness, Ammonia/Nitrites 0, nitrites negligible and temperature 78°F. I change around 8 gallons every ten days, filtration is undergravel.

The problem is with one of the large *Pangasius*. I noticed four white spots (three around the head and one behind the dorsal fin). Treating for White Spot, fungal, protozoan, bacterial and parasitic infections had no effect. The spots have grown to quite large angry patches and appear to have a tail. These spots clear up and reappear at irregular intervals; at their worst, the fish gasps for around 30 minutes after feeding otherwise it appears to be perfectly healthy and in no discomfort.

AQUARIAN ADVISORY SERVICE

(continued)

I recently successfully treated my Angel for *Hexamita* with Metronidazole (obtained from a vet) but trying it on the Pangassius (a book remarked on the similarity between symptoms of *Hexamita*) brought no relief. Incidentally all the other fish are fine!

A: The Siamese Shark, *Pangassius sutchi* has the potential to grow to 18" although aquarium specimens usually only reach 12". Even so, they need about 40 gallons each to maintain health. The young will shoal but the adult fish are loners, being scaleless, they are susceptible to irritation by ammonia, nitrite and even average levels of nitrate. The skin irritation gives sores, which become lesions that grow protective granulomas — the things you describe. Chemical treatments such

as White Spot Cures just add to the irritation and make matters worse. In addition to the overcrowded Pangassius you have a very busy aquarium and I do not believe that nitrates are negligible — check your Test Kit results against those of another one. Eight gallons of water changes every 10 days is not enough — the tank is a zoo and needs daily flushing! Even the undergravel filter is unsuitable — this merely keeps the filtered dirt in with the fish and adds to the catfish's skin irritation. You need to reduce the stocking level, increase the water changes and add a power filter system that removes dirt from the tank. Even then the tank will only support one *Pangassius sutchi*. The fish is really a tropical pond species, grown as a food source and should not be considered an aquarium fish.

IN MEMORIAM

We are sad to report the passing of another aquatic stalwart - Dudley Forde of Portsmouth A.S. Dudley held the all-important post of Secretary of the Society for the past 12 years and was also Show Manager for a number of years too. As well as being active in his own Society, Dudley represented Portsmouth at Federation Assemblies, attending every one since 1976 a record unlikely to be equalled by most people. Part of the familiar Pompay Group which travelled to Shows and included Jack Stillwell, the late-lamented Vernon Hunt, Wally Ryder and so on, Dudley was a dedicated aquarist, quiet by nature, but a good worker, he was just coming up for retirement and will be sadly missed. Our condolences are extended to his family and we share our sorrow with everyone that knew him.

Jack Stillwell, Portsmouth A.S.

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Waltham now has its own **World Wide Web** pages on the Internet. It includes FAQs (frequently asked questions) on pet fish, as well as information on dogs, cats and birds. The fish section is handled by the Aquarian Advisory Service with updates from the Waltham Aquacentre.

Many aquarists have PCs and modems these days (the sitting looking at a box syndrome) and some have e-mail addresses. The Aquarian Advisory Service handles email as well as 'snail mail' (the Post Office) and has two e-mail addresses:

David Ford@CompuServe100410,726 or **dave@aquarian.demon.co.uk**.

If you are a PC-owning aquarist you can contact Dr Ford with any fish-keeping problems, but if you also have an Internet connection you can take the grand tour of Waltham by logging-on to <http://www.waltham.com>

Note that the pages include pictures of the Waltham Petcentre as well as text and these so-called Gifs require at least a 14,400bps modem, preferably 28,800. If you have a 9,600 modem or a CompuServe connection (which is still 9,600 in many parts of the country, whatever your modem setting) the download will take a long time and run-up high phonebills.

With a fast modem and a good Internet Server (Demos are 28,800 UK wide) you can receive Waltham data quite fast, including a questionnaire to send e-mail requests for help from the Centre's Vets, Animal Behaviourists and Fish Experts.

Editor's Note:

Not to be outdone, you can also reach FishWorld by e-mail. My address is **Dick Mills@CompuServe 101372,3451**. In a twinkling of an eye, you too can be published.

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balance, the rest of the book's excellence outweighs such tiny irritations. Dick Mills

Some Reflections of an Old, Very Tired, Aquarist
 (but I've still got my good looks)
 by Wart Ellery

In the late 1950's and early 1960's, I was actively pursuing interests such as cricket, Humphrey Lyttleton, Jayne Mansfield and a battered old BSA Bantam (though not necessarily in that order). Through a friend of mine I got interested (for the kids' sake, you understand) in fishkeeping.

I remember my first tank, a three footer with a slate bottom. You see, in the early days of our hobby there wasn't much technology about; internal heaters, with or without a thermostat were well into the future. To keep the water warm you had a little gas-fired Bunsen-burner placed under the tank with the flame playing on the slate bottom - unlike glass the slate didn't crack with the heat. Sometimes you tried a couple of candles instead but these were not quite so reliable as they blew out.

Also, of course, pumps were non-existent too, or at the very least, very expensive and noisy - you would keep your neighbours awake and plates and cutlery would vibrate in the adjacent rooms! As for aeration, you used to use a car inner tube (yes, even tubeless tyres were yet to come), pump it up and lay it near the tank with a piece of thin pipe leading into the aquarium to aerate the water. It worked quite well except you had to remember to pump it up fairly frequently (sometimes it burst, much to the consternation of the fish!). This type of set up did not foster ideal relationships with the wife (or her mother).

Do you remember the old advert 'I've got Millions!?' This appeared continuously for years in the national fish publications and periodicals. It belonged to a Mr Arnold, who was a member of the East London Society, and it referred to his business - 'Worms.' His whole garden (and most of his house in warm weather) was geared to the production of all types of worms. He had the only moving garden in the East End!

And what about Shows? Well I got hooked on those too, and so did my family, particularly my son. We used to get about a bit in relative comfort - we had sold the Bantam and bought a three-wheeler with the clutch gone! Kings Lynn is about 100 miles away (in the three-wheeler it seemed more like 150) from where I live and it meant an early start to get to the Open Show on time. We slogged up to the Lyn on a cold wet morning and had a good day. I remember it well because we won our first Trophy this day and I was elated, so much so that it wasn't till I was nearly home I realised I was on my own - I'd left them all behind! Still, it was a nice quiet drive home. Ah, those were the days.....I bet there are others with equally vivid memories of the pioneering days of fishkeeping and showing; I wouldn't mind reading about them and I bet you wouldn't either. (You'll have to lay it on thicker than that Mr Ellery, our readers aren't very susceptible to subtle hints - Ed).

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