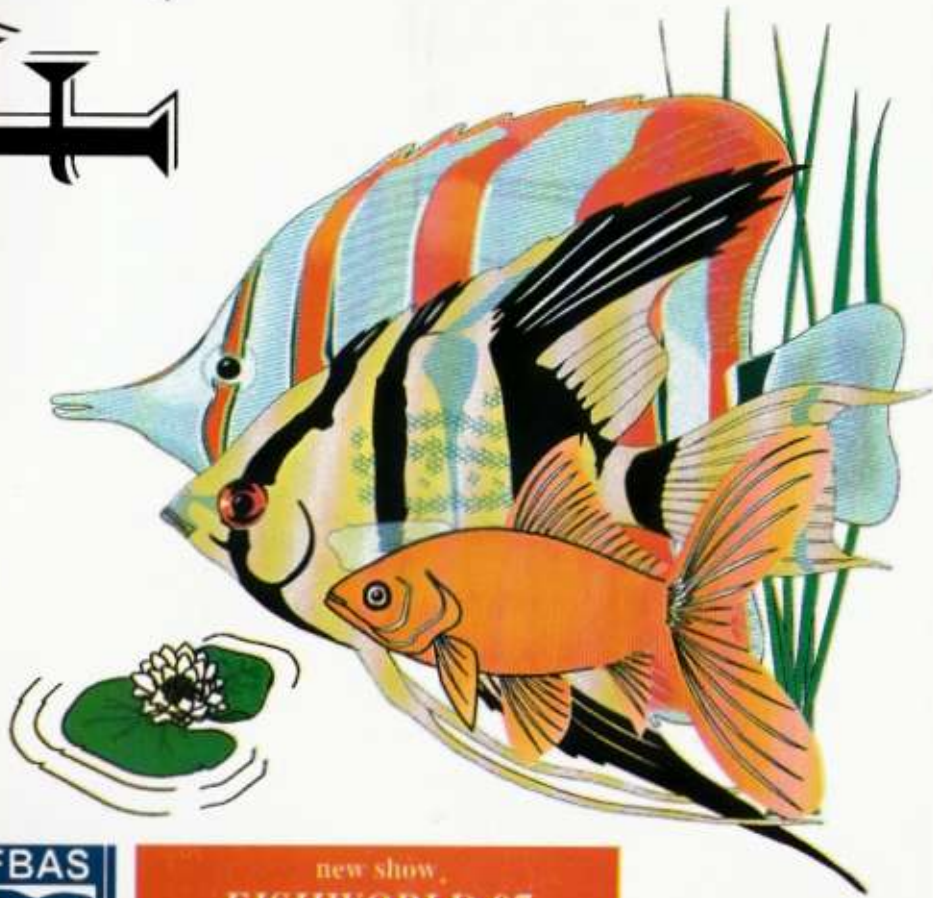


FISH WORLD

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new show,
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aquarian

1997 SHOW DATES

(Rule Codes: A=A of A; FB=FBAS; FN=FNAS; FS=FSAS;
I=International Goldfish Standards; N=NEFAS; U=USofA; Y=YAAS)

2.3.97	Burley-in-Wharfedale A.S.
30.3.97	Northampton A.S.
7.4.97	Eastleigh A.S.
13.4.97	Aberdara A.S.
20.4.97	Straod A.S.
3.5.97	Southend, I & D.A.S.
4.5.97	Musselburgh A.S.
11.5.97	Corby A.S.; Four Lane Ends A.S.
18.5.97	Isle of Wight A.S.
7.6.97	South Park A.S.S.
22.6.97	Workington A.S.
29.6.97	Seascale Junior Fishkeepers
5.7.97	Port Talbot A.S.
20.7.97	Bournemouth A.S.
27.7.97	Kent Association of Aquarist Societies
24.8.97	Cramlington A.S.
13.9.97	Hounslow A.S.
12.10.97	Solway A.S.

FESTIVALS & CONVENTIONS

15.3.97	Kent Association of Aquarist Societies, Smithys Hotel, Margate, Kent
12/13.4.97	YORKSHIRE AQUARIST FESTIVAL, Doncaster
31.8.97	TYNE TEES AREA ASSOCIATION
25/26.10.97	BRITISH AQUARISTS FESTIVAL, Bowlers, Manchester
31/10/2.11.97	SUPREME FESTIVAL OF FISHKEEPING, Weston
2.11.97	SUPREME CHAMPIONSHIP & OPEN SHOW

Note to Society Show Secretaries:

The above dates 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:-

Show Information.

Dept FW, 22 Flamsted Avenue, Wembley, Middlesex HA9 6DL
In order to provide the most complete service to all Societies, please communicate your Show Information to the same address.

Dear Reader

Welcome to the December issue of FISHWORLD. Usually, we look forward to this time of year with a sense of anticipation — especially if there are children around for, it is their special time of year with the excitement of all that the Festive Season brings. However, at this particular period of time, things have not been going too well for the hobby, has recently been deprived of three of its stalwarts — each one contributing to the hobby in his, and her, own particular way. You will forgive me if this seems to be taking advantage of this column to mention these sad occurrences but as one of those concerned was a long-standing member of my own Society you will see that I am more affected than normally would be the case. However, despite these losses, you will be wanting to know what FishWorld has in store for you this time. There is, naturally enough, reports of the last two major aquatic events of the year — BAF and Weston. Both these events had their 'moments' as you will discover. Terry Waller turns his eye on to an African genus whilst from the electronic world of cyberspace we have something North American. John Edwards turns Roving Reporter with a difference and Norm Green is up to her cynically enquiring best. Add to these our usual piscine pull-outs, products and events news and you will soon be anticipating the new season.

As is traditional, I would like to thank all contributors and advertisers for supporting FishWorld throughout the past year and look forward to much more of the same in 1997. If you didn't see your favourite subject covered in the last four issues you can do one of two things — write and tell me, or better still, write about it!

Dick Mills, Editor, FishWorld

Contributions for the next issue should be in hand by January 31st 1997 and sent to: FishWorld Magazine, 10 Kosen Grove, Farnham Royal, Buckinghamshire SL2 3DZ. (Tel/Fax: 01753 646134).

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Memories of an Old, Tired Aquarist

by Wart Ellery

People often say to me, with all the choice, technology and information currently available, aquarists are not as good as they used to be years ago.

We all know the 'Fishy Tales' of 12" Mallies and Swordtails, Three-spot Gouramies with 9" between the spots, that would have problems turning round in 2 foot tanks but, in the clear light of day, the fact remains that there is a lot of truth in this statement.

I think the one thing we had in abundance years ago was enthusiasm and drive to succeed, sometimes bordering on fanaticism. It was the sheer practicalities (or problems that others would not have attempted) that caught the attention.

There was Sybil taking Caesar, her Snakehead to Shows. 'So what?' you might ask. Well, nothing much except that Caesar was 4 foot long had a girth almost as fat as a telegraph pole and had to be sedated for his own safety in transit.

How about the guy from Thurrock who used to turn up at Shows with his 50" Electric Eel? This was in most cases the highlight of the Show, not necessarily the fish itself but the sheer 'entertainment' of watching it being benched — regaled in rubber apron, rubber gloves and hat, Jim would plunge his hands into the huge plastic dustbin, used for transportation and, amongst smoke, sparks, splashes and many verbal discharges would haul it out and dump it in the show tank, again with the top glass being held down with house-bricks.

I remember Bill Argent, of East London, cancelling his holiday at the last moment because his Congo Tetra looked like spawning, but the guy who really wins 'Gold' for devotion to the hobby was not my son (who took 48 entries to the Taurton Show one day and 61 to Newcastle the next, chauffeured by me) but one Cyril Davies.

Cyril was shy and retiring, Eileen wasn't. 'Hello,' I said 'you're new,

aren't you?' 'Yes' he said, looking at the floor. 'I design things' he told me.

'Oh,' I said 'are you famous?'

'Well, I'm working on Concorde at the moment.' I was impressed, could this be an aeronautical engineer, a second Barnes Wallis perchance?

'Yes' he went on 'we've been on this project for six weeks and it's giving me hell.' 'What did you design?' I asked, in awe. 'The locks on the toilet doors' he replied without blinking!

The speaker that evening was Mike Shadrack, from BASS, who spoke at length about a new fish, a livebearer called *Ameca splendens* which had just appeared. All through the talk he kept emphasising the need to look after them and conserve them as there were only a few pairs in the country, at the end a pair were auctioned and Cyril won them and was dutifully told to guard them with his life. About a year later (Concorde having flown complete with functioning toilets) Cyril was out of work. 'What do you do now?' I asked. 'Just muck about at home,' he said. 'The fish take up a lot of my time, I'm still doing the *Ameca splendens* would you like a pair?' I arrived Sunday morning to collect a pair of the rare, extremely hard to get, new livebearers; in the hall was a three foot stand with two tanks choc-a-bloc with *Amecas*. 'Take what you want,' he said. I did and then embarked on a tour of the house. Apart from the hall, there was a six foot tank in the living room, a four footer in the kitchen, two two-footers in the breakfast room, an ornamental five-sided in the bedroom, an odd-shaped one in the bathroom and five tanks in the conservatory all full of, yes you've guessed it, *Ameca splendens* — thousands of them! 'I think I'll try them in a pond, next year,' said Cyril. 'You haven't got a pond, have you?' I asked. 'No, but I will have' he answered. Now, to me THAT'S ENTHUSIASM!

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From the Chairman of the
Federation of
British Aquatic Societies



Dear Friends,

So draws to an end my two years as Chairman. I have tried to promote the hobby of fishkeeping during my term of office. This has always been my prime reason for being involved with the Federation. This year, for the first time, we saw a "Junior Open show" at the Supreme Weekend of Fishkeeping with almost a hundred entries on the bench. This was a very refreshing start to a new project for 1997 concerning the promotion of Junior Fish keeping. I would like to thank all those who took part in this project.

The year has seen the passing of many of the elder fishkeepers. My own club has seen the passing of three members. In order that the hobby does not die we must look to ways in this coming year of promoting our clubs by advertising in libraries and youth clubs and attending local events such as garden shows etc. We also need to listen to our members' views and not shut them out. We often say "we have been there, tried it, done it before." This will never encourage them to come up with ideas. Let us look to the future and get some new blood onto our committees and our council.

I would like to thank all those who took part in the Supreme Weekend of Fishkeeping for making it yet another successful weekend. There were many more exhibits this year than before. May we encourage this to continue even considering the possibility of a new venue.

I would like to take this opportunity to say a big thank you to all of you who have supported me during my two years as Chairman and I look forward to serving you, if it be your wish, for a further two years.

Wishing both you and your Societies a Happy Christmas and a successful year of fishkeeping in 1997.

Peter Furze
Chairman

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TETRA introduced their new range of Aquaplanters for pools. Flexible, strong and simple to use these planters are manufactured from a synthetic woven material called Plantax. These are purchased in flat-packs with two sizes 7" x 7" x 7" and 10" x 10" x 8". There are no sharp edges and they can be placed on uneven surfaces. These planters cannot leak compost into the water and represent a splendid alternative to conventional baskets and crates. Tetrapond Aquatic compost is also new and complements the new planters. It is available in 4 litre, 8 litre and 25 litre packs. Further information from: **The Tetra Information Centre, Lambert Court, Chestnut Avenue, Eastleigh, Hants SO53 3QZ.**

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Two new Pond Professional products from **PET CHOICE LIMITED**. These are called Regal Koi Colour Enhancement Pellets and Regal Pond Floating Food Sticks. Both are available in 120g sizes. Details from: **Pet Choice Ltd., Gladstone Street, Blackburn, Lancashire BB1 3ES (Tel: 01254 34545 Fax: 01254 681446)**
Following the success of their New Wave Pond care range, **NEW TECHNOLOGY** have introduced a similar Aquarium Care range. Product names have been carefully chosen to

allow easy selection for the appropriate purpose. Typical products are Stress-go (for dechlorinating, metal-removing and stress-relieving), Mature Tank (starter culture to accelerate early tank maturation) and White Spot (remedy for the common disease). All are available in 125ml and 500ml sizes and come with measuring beaker and comprehensive aquarium care instruction leaflet. Details from:

New Technology Ltd., 13 Branbridges Industrial Estate, East Peckham, Kent TN12 5HF (Tel: 01622 871387 Fax: 01622 872331)

Whilst tobacco smoking is being increasingly banned from public places, **REMANOID** have come up with a Smoking Pond Water feature. A clever heating device immersed in the water produces serene smoke effects. Details from:

Remanoid Ltd., Unit 44, Number One Industrial Estate, Medomsley Road, Consett, Co. Durham DH8 6SZ (Tel: 01207 591089)

A new range of Pond Professional products from **TAP** included Anti-Foam and Aquo Gel. The former stops unightly foaming on the water surface whilst Aquo Gel is an antiseptic gel designed to be applied directly to any fish wounds. The complete products range includes the Pond Doctor and aquarium Doctor ranges of treatments and foods, plus the aquo Media range and TAP Test Kits. Details from:

TAP Ltd., 64/65 Anthea Road, Fishponds Trading Estate, Fishponds, Bristol BS5 7EX (Tel: 0117 958 5588 Fax: 0117 958 5577)

The very first of INTERPET'S products, Liquify, has been re-launched with a new packaging, gone are the familiar, traditional red and green tubes to be replaced by modern dispensers still in red and green liveries to denote suitability for egg laying or livebearing fish suitability respectively. Today, the Interpet range covers every conceivable aquarium need, from decoration to more essential items such as Gravel Cleaners, Food and pond equipment with such innovative equipment such as the Pond Worker range of in-pond Filters and Ultra-violet Clarifiers.

The Gravel Cleaner allows any amount of fine detritus to be cleared from the gravel whilst leaving the gravel in place; this serves important functions — not only removing dirt which may otherwise be stirred up by the fish but also ensures that adequate waterflow is maintained through that other important Interpet item, the biological, sub-gravel filtration system. Associated with the Gravel Cleaner are Fresh Start and Trizyme Biostart who actions in maintaining important bacteria actions in the aquarium are fully explained in the accompanying leaflet and packaging.

The Nautic Treasures of aquarium ornaments is sure to attract the younger fishkeepers with highly-detailed models of wrecked sailing ships complete with real roping and nets. Additionally Architectural Ruins and Rocks, also modelled in inert safe, polyresin are available. Interpet have introduced trial size sachets of their Zooplankton. Once the fish have grown accustomed to it you can easily upgrade your purchase to the 50g and 100g jar sizes. Each jar when opened should be stored in the refrigerator to maintain the food in its optimum condition for up to a month or, as it is likely to prove, far shorter once the fish gets taste!

More good news is that the Aqua Air range of pond air-pumps have been improved but at no extra cost. With Dualife diaphragms and carbon-impregnated air filters they represent excellent value for money considering their high quality performance. Full details of all Interpet products from: **Interpet Ltd., Vincent Lane, Dorking, Surrey RH4 3YX (Tel: 01306 881033 Fax: 01306 865009)**

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Rolf C. Hagen, California Drive, Whitwood Industrial Estate, Castleford, West Yorkshire WF10 5GH (Tel: 01977 556622 Fax: 01977 513465)

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QuArt products can be bought by Mail Order or ordered from your usual dealer. Any reader wanting further information should write to:

QuArt PRODUCTS, 114 Edin Road, London W14 9AP (Tel: 0171 371 3965)

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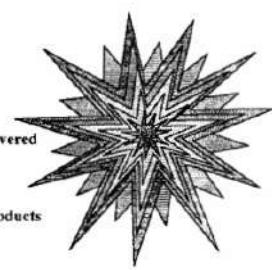
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1996 Supreme Festival of Fishkeeping

This year's event, held as usual at Pontins, Sand Bay, Weston-super-Mare (reputedly near the sea) and again sponsored by **Rolf C. Hagen** got off to its usual hectic Friday afternoon mixture of arrivals, re-acquaintances and last-minute putting up of Trade exhibits. Each arrival was presented with the Festival Programme which they could browse through at their leisure to plan their next two days' activities. Despite the Festival being a public-attended two-day event, the main emphasis is on resident participation in the planned events. These included a Fancy Dress Competition for adults on the Friday evening as well as socialising and listening to the entertainment put on by Shades and the singer Donna Freeman.

However, everything was gearing up for the start of the Festival proper on Saturday morning which was to feature a new event — **the Supreme Junior Fish Show**. Here, things were aimed at providing activity for Junior Residents although in a brilliant gesture, day-visiting Juniors could 'Adopt a Fish' for the day to enter into the Show and thus feel part of the action. John and Liz Fell, the Show Secretaries for the day, were soon hard at work booking in the entries, some from hardened exhibitors despite their tender years, others from less-experienced fishkeepers. Keeping a controlling eye on things was Senior Judge, 'Uncle Jim' Carney who soon had his team of Judges at work sorting out the 99 entries.

Elsewhere the first Lecture of the Weekend featured Bill Rundle, FBAS President with his presentation on Aquatic Plants, whilst Juniors had their own lecture by Peter Anderson. If 'hands-on' experience of live creatures

was your interest the display by the International Herpetological Society was the place to be. To escape the accompaniment of shrill, encouraging voices all helping to add to the excitement of the qualifying Heals of the **Junior Furnished Aquarium Race** you could (if you were a resident) find quieter surroundings at the bottom of the swimming pool whilst experiencing a **Try-Dive** organised by the Bristol Scuba Club.

The afternoon brought in the Semifinals of the **Interpet Fishkeeping Challenge** where the Avon ballroom took on an atmosphere much reminiscent of School's Examination Day, as contestants struggled to complete the written down answers to the questions. Soon excitement built-up again as Geoff Copes supervised the **Tug o' War** contests, first between the Juniors and then the Adults. Away in the lecture room, Les Holliday was presenting his Marine Aquarium presentation — following a now almost 'traditional-to-Weston' rushed replacement projector operation (prayers for the projector now form part of the standard speaker-introduction sequence!). However, you can't keep the kids down for long and they were soon at their very best for the Prize-giving for the **Supreme Junior Open Show**. This turned out to be one of the most enjoyable parts of the whole weekend, seeing the delight on their faces as they received their due Awards from **Hagen's** Andrew Bartyla; thoughtfully, the organisers had arranged that everyone managed to be awarded something in addition to those taking honours on the Showbench and all went away with 'T Shirts', Nutrafin food and show tanks (see **Junior Show Report** and results elsewhere in this issue).

Naturally enough, the adults had their share of fun too but this revolved around the entertainment in the Avon Ballroom following on from the **Presentation Dinner**. The evening began with the **Children's Fancy Dress** in which there were some inventive costumes, especially the shimmering jellyfish within whose

WESTON HAPPENINGS



The children are keen to learn about endangered species



Trevor Butler chats up a Jellyfish in the JUNIOR FANCY DRESS



It was almost a Mission impossible getting this aquarium into the Hall!

Alan Stevens answers up as David Marshall still thinks about it!



Alan Stevens, Eastleigh A.S., receives Interpet Fishkeeping Challenge Trophy from Richard Burton

PRIZEWINNERS AT WESTON

Top Six Supreme Winners



John Egan, Port Talbot A.S., receives 1996 FBAS SUPREME CHAMPIONSHIP Awards



Geoff Cape gets a Budgie decorated cake from a young fan

'bubble-wrap' fronds the young lady must have fired beneath the spotlights. Loudest cheers were for the two toddlers at the end dressed as two of the 101 Dalmatians. The cabaret was quite sensational, as RoboMan's explosive, pyrotechnic presentation proved to be a topical nearly Guy Fawkes' Night act, whilst the comedy rounded off the evening with many a hearty laugh.

Sunday meant only one thing to most of the fishkeeping residents — the **Hagen Masters Open Show** — whilst to an elite few more, it was the **'SUPREME'** itself. Much seemed to be at stake too in this and the other big Final of the day; would Dave MacAllister's *Xiphophorus birchmanni* repeat his BAF Champion of Champions triumph and would Alan Stevens do likewise with a follow up and add the **Interpet Fishkeeping Challenge** Title to his AquaChamp crown? But first of all there were other attractions to enjoy.

Following on from Colin Grist's hosted programme on **Conservation**, Juniors were invited to participate in an **'Underwater Fancy Dress'** in which they portrayed all the main elements in the marine food chain — anything from phytoplankton up to a shark — which was starkly put at risk when the villain of the piece, Man's pollution, came along. This novel way of imparting important conservation aspects was much appreciated by both kids and adults alike. A similar theme was re-enacted in the Avon ballroom stage by members of **Seascale Junior Fishkeeping Society** who, yet again, managed to be one of the biggest contributors to the weekend's enjoyment.

Trust the traders to lower the tone of serious competition. No sooner had the **Finals of the Furnished Aquarium** races taken place in the Junior and Adult series than it was chaos and mayhem time as the Trade Teams tried to outdo, sabotage and generally upset everything around them. In the background the Master of Ceremonies Trevor Butler quietly got on with the fifth tank on his own and should have won but justice was seen to be done and, despite some highly illegal, air-operated shenanigans, talcum-powder additions and the like, the **Pontins Team** again romped home dishevelled winners.

Peace descended once more in the shape of the **Final of the Interpet Fishkeeping Challenge** and, yes, Alan Stevens did manage to win, beating Dave Marshall of Ryedale A.S. 26-21 in a close-fought contest. Sadly, Dave MacAllister's fish couldn't get into the final six in the **Supreme** which was handsomely won by John Egan's colourful *Herichthys regani*. In a departure from previous tradition it was very pleasing to see that the result of the **Supreme** was announced before those of the **Hagen Masters' Open show** thus enabling everyone a chance to see the winning fishes before they were debatched (see Supreme Results elsewhere in this issue). **Best in Show** in the **Masters** went to a *Carthubbia stuarti* owned by K. Myers.

Once again, 'Weston' has come and gone and yet again it had something new to offer and 'investment' in fishkeeping's young's will surely pay off in keeping the hobby alive and thriving.

MAIN WINNERS
FBAS Supreme Championship

- | | |
|---|---|
| 1st <i>Herichthys regani</i> 84 points — John Egan | 4th <i>Lamprologus daffodil</i> 81 points — John Hill |
| 2nd <i>Synodontis frontosa</i> 83 points — Len Hughes | 5th <i>Lamprologus calvus</i> 80 points — John Powell |
| 3rd <i>Berbus aalepis</i> 82 points — Terry Hewitt | 6th <i>Lamprologus calvus</i> 79 points — Chris Bramble |

- Best in Hagen Masters Open Show** — *Carthubbia stuarti* — K. Myers
Interpet Fishkeeping Challenge — 1st Alan Stevens 2nd David Marshall
Interpet Society Challenge — Portsmouth A.S.
Best Trade Stand — Argle Aquarium Plant Company



The BTC and Coral Reef combination entry



The Pontins' winning FURNISHED AQUARIUM RACE Team

The Interpet team couldn't quite get Hagen's Tim Smeiturst in the tank — but they tried!



Juniors Get Weston Off to Flying Start

John & Liz Pell, Show Secretaries, SUPREME JUNIOR FISH SHOW report on a new event

"The **Supreme Festival of Fishkeeping** at Weston-Super-Mare has, over the years, become one of the premier events in the hobbyists' calendar. This year, again sponsored by **Rolf C Hagen**, in association with the Federation of British Aquatic Societies (F.B.A.S.), saw many of the favourite attractions returning to the enjoyment of those in attendance. As with any annual event, it is important to introduce new ideas to the programme. Whilst not specifically titling November 2nd **'Juniors' Day'** there was a conscious effort to encourage younger members to be a part of that day in some way. Linking this with the quest for innovation, the first **SUPREME JUNIOR FISH SHOW** was held on the Saturday. With the introduction of new ideas there must be a certain amount of trepidation, however, we need not have concerned ourselves, the youngsters were brilliant. As with many Shows, the first half hour or so after the doors were opened was somewhat hectic, particularly with the paper-work, however, there was order in the proceedings and with 'Uncle Jim' Corney fielding all sorts of

questions on fishkeeping and Showing, the morning moved inexorably towards judging time. With Jim overseeing as Senior Judge, the team of W.G. Best, K.R. Doswell, J. Egan, C. Harding, J.C. Hill and L. Pearce worked their way through the Classes. Our thanks go to all of these gentlemen and in particular to Mr. Doswell for taking on Class Q with 21 entries!

The **Best Fish in Show** had been chosen and it was time to let everyone back into the Show Hall. Any last minute worries we may have had were very quickly dispelled by the shrieks of delight as, first one or two Juniors and then many more found their fish had won a Place Card. The look of sheer delight on the faces of the youngsters as they collected their Awards at the ceremony later that afternoon told us of the success of this new feature at Weston.

Trophies and 'T' Shirts (by BTC), Show Tanks (by Sjo Glass and Terry Waller) and Place Cards were presented by Andrew Bortyla of Hagen and Peter Furze, Chairman F.B.A.S. In addition, all other participants received 'T' shirts and Show Tanks and assorted tubs of Nutrafin Fish Food.

The facts and figures were

- 99 entries with **Best Fish in Show** being awarded to an *Etheostoma caeruleum* owned by Luke Powell of Erith & District A.S.
- The **Highest-pointed Individual** was Robert O'Grady of Swansea A.S.
- 2nd Matthew Fiddes from Mortlake
- 3rd Michael Bradbury from Hemel & District A.S. and
- 4th Daniel Joseph of Erith & District A.S.
- Robert's individual success also earned Swansea A.S. the **Highest-pointed Society Trophy**.
- 2nd Seascale, 3rd Hemel & District A.S. and 4th Erith & District A.S.

Our final thanks go to all who participated in the Show (Mums, Dads, Teachers included) and to those who helped, both with the lead up and during the Show.

ALL THE HAPPY HAPPY JUNIORS



Luke Powell of Erith, Best in Junior Show winner



Robert O'Grady, Swansea A.S., Highest Pointed Individual had his Mum help in carrying off his Trophies



Spot the oldest 'JUNIOR' — Pete Cairns of Haslemow — in Geoff Cape's Tug of War

1996 FBAS SUPREME CHAMPIONSHIP

Entry	Species	Size	Body	Colour	Fins	Cond. Dept.	Total	Comments
1.	<i>Microgeophagus ramirezi</i>	14	14	13	13	14	67	Fin Rays
2.	<i>Nannostomus hartwegi</i>	15	15	13	14	13	70	Lays on bottom
3.	<i>Hyphessobrycon heterocentrus</i>	13	13	13	13	14	66	Body split caudal
4.	<i>Xiphophorus variatus</i>	14	14	13	14	14	69	Getting old
5.	<i>Xiphophorus clemenciae</i>	20	13	12	15	14	74	No colour
6.	Female Guppy	20	13	13	14	14	74	Shapel
7.	<i>Nannostomus beckfordi</i>	10	15	14	15	15	69	
8.	<i>Brachydanio rerio</i>	17	13	13	15	15	73	
9.	<i>Betta splendens</i>	14	13	14	14	10	65	Unable to get of bottom
10.	<i>Betta splendens</i>	13	10	12	12	11	58	Bad tail damage
11.	<i>Betta splendens</i>	15	13	13	13	13	67	
12.	<i>Betta splendens</i>	14	14	15	15	13	72	Nearly red
13.	<i>Corydoras bolivianus</i>	14	14	15	14	15	74	Damaged dorsal

1996 FBAS SUPREME CHAMPION

owned by John Egan, Port Talbot A.S.

Entry	Species	Size	Body	Colour	Fins	Cond. Dept.	Total	Comments
17.	<i>Herichthys regani</i>	20	15	16	16	16	84	A very nice fish
18.	<i>Barbus filamentosus</i>	11	14	13	14	14	66	Caudal damage
19.	<i>Labeo cylindricus</i>	13	13	14	12	15	67	Torn fins
20.	Goldfish	14	14	15	14	14	71	
21.	<i>Danio aequipinnatus</i>	12	15	16	16	16	75	
22.	<i>Lamplogus 'daffodil'</i>	20	15	15	16	15	81	4th PLACE
23.	<i>Corydoras sedalis</i>	16	16	16	15	15	78	
24.	<i>Barbus miolepis</i>	20	16	16	15	15	82	3rd PLACE
25.	<i>Ctenopoma acutirostre</i>	15	16	15	15	15	76	
26.	Goldfish	13	13	13	14	15	68	
27.	<i>Betta splendens</i>	17	15	13	15	15	75	
28.	<i>Lamplogus calvus</i>	20	15	15	15	14	79	6th PLACE
29.	<i>Labeo lineatus</i>	20	15	13	14	11	76	Caudal fin
30.	<i>Synodontis frontosus</i>	19	16	16	16	16	83	2nd PLACE
31.	<i>Pseudogambusia zanzibara</i>	17	15	15	13	14	74	
32.	<i>Lamplogus calvus</i>	20	15	15	15	15	80	
33.	<i>Xiphophorus birchmanni</i>	20	14	14	15	14	77	
34.	<i>Girardinus microdactylus</i>	16	15	13	15	15	74	
35.	<i>Girardinus microdactylus</i>	18	10	12	15	12	67	Bad mouth; marks on back
36.	<i>Xiphophorus cortezi</i>	15	15	15	15	15	75	
37.	<i>Rivulus macleinatus</i>	17	15	12	15	13	72	
38.	<i>Corydoras paleatus</i>	15	12	13	13	13	66	Old fish
39.	<i>Paratilapia bleekeri</i>	13	14	16	15	16	74	nice fish; some growing to do
40.	<i>Limia nigrofasciata</i>	20	14	14	15	14	77	

FINAL TOP PLACINGS

- 1st PLACE *Herichthys regani* owned by John Egan
- 2nd PLACE *Synodontis frontosus* owned by Len Hughes
- 3rd PLACE *Barbus miolepis* owned by Terry Hewitt
- 4th PLACE *Lamplogus 'daffodil'* owned by John Hill
- 5th PLACE *Lamplogus calvus* owned by John Powell
- 6th PLACE *Lamplogus calvus* owned by Chris Bramble

Barbus gelius (Hamilton & Buchanan).



Common Name: Golden Dwarf Barb.

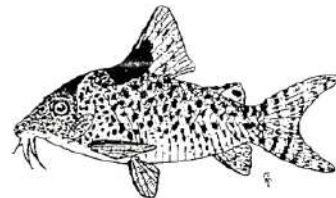
Colour: Basic body colour silvery-bronze to (by reflected light) gold, shading olive-green to brownish towards the dorsal contour, silvery-white on belly, a subdued light golden stripe runs posteriorly from the operculum and terminates on the caudal peduncle, this light stripe is broken by and accompanied with small dark blotches, three further dark blotches are present on or above the golden stripe, a black blotch with a light centre is present below the stripe midway between the dorsal and the pelvic fins, black blotches on the anal and dorsal contours continue into the base of their respective fins. Dorsal, anal and pelvic fins pale yellow, dorsal with a dusky spine, dorsal and anal with the aforementioned black areas intruding from the body, caudal very pale red, pectorals colourless, mouth edged with black iris of eye yellowish-green.

Characteristics: Body and finnage shape as illustrated. Females are deeper bodied and slightly larger than the males. No barbels are carried.

Remarks: A small species undersanding and ideal for the community aquarium preferring the cooler side of the tropical aquarium range of temperature. Exhibited in show class Bz.



Corydoras amblyacanthus (Cope).



Habitat: Assam, Bengal and central India in quiet water swimming in shoals near the banks, beneath and among vegetation.

Temperature: 19° - 21°C (66° - 70°F)

Water: P.H. 6.6-7. soft slightly acid water.

Feeding: Will take all types of food among which vegetable green matter should be included remembering that with their small mouths the food should be of a suitable size.

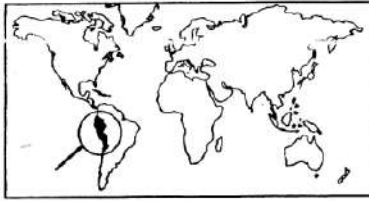
Breeding: To breed this species a 450mm x 200mm x 200mm tank would be suitable, filled with slightly acid and soft aged water at a temperature not exceeding 22°C (72°F). Both fine and broad leaf plants, or if preferred nylon mops can be used as a spawning medium, the conditioned fish are placed in the tank overnight, they will properly spawn in the morning at first light. The male drives the female into the spawning medium where she scatters eggs in the normal barb manner with the male fertilizing them. One authority states that the eggs are not strewn but laid on the undersides of broad leaf plants, if you follow our suggestion of using both fine and broad leaf plants you have the best of both methods. Adults do not normally eat eggs or fry but it is advisable to remove them to prevent accidents.

Common Name:

Colour: Basic body colour light brown to fawn shading towards the dorsal contour, lighter towards the belly, belly and chin white, a greenish metallic sheen is present on the body especially around the junction of the body scales, a blackish shoulder blotch intrudes onto the anterior base of the dorsal fin and a further dark area is present on the head above the eye. Flanks and head scattered with irregular blackish blotches, those on the head becoming smallish spots. Fins greyish or very pale fawn, dorsal with its aforementioned black blotch at the base, a few black marks are also present on the posterior rays, dorsal spine black, caudal and anal with rows of black bars, pelvic and pectorals without marking, adipose with a black bar on the spine and a black blotch on the centre of the membrane.

Characteristics: Body and fins shaped as illustrated. The blackish shoulder blotch intruding onto the dorsal fin appears to be present in *Corydoras amblyacanthus* from all locations.

Remarks: A smallish bottom dweller *Corydoras amblyacanthus* is quite happy to scavenge for food left by others. Ideal for the community aquarium. Exhibit in show class H.



Habitats:	The Rio Apurimac and Rio Amazonas river in Peru and the Rio Napo of Ecuador.
Temperatures:	22°-27°C (72°-81°F).
Water:	pH 6.9 - 7.2.
Feeding:	All types of food accepted from live to freeze dried and flake, catfish are mainly bottom feeders and if they are kept in a community, dried food should be soaked in order that it reaches them.
Breeding:	A specific breeding method is not known but it possibly follows the general pattern for <i>Corydoras</i> as mentioned in the preface.
Comments:	The specific name of <i>Corydoras amblycus</i> was erroneously used to describe the species we now know to be <i>Corydoras armatus</i> which although it carries dark blotches on the body is distinguished in displaying a long spine and first ray on the dorsal fin.

The Orange-throat Darter as an Aquarium Species

by Robert Rice, via the Internet and via Portsmouth A.S. magazine Postimes

Most people are completely unaware that Darters exist. Darters are those small mystery fishes that one occasionally sees literally darting around the edges of streams. Unless you are unusually perceptive or aggressive you have probably just not noticed them. All Darters are of the Perch family, and, as a general rule, have no swim bladder and thus stay on the bottom feeding and living out their lives. Darters display a surprising range of colour and body types and, in general, make a fascinating aquarium pet. They display a degree of sexual dimorphism with the males being the brighter and more aggressive of the sexes — which makes them all the more interesting!

The main consideration is temperature requirements as many species of Darters must have cold water to thrive. The Orange-throat Darter (*Epiplatys spilargenteus*), in my experience, is the exception. I have collected them in waters as high as 81°F and have kept them in community tanks with great success. There is a large genetic gradient range in the Orange-throat Darter in its size, colour and tolerance to domestic life. So keep in mind your success will depend to a large degree on the stock you begin with. Therefore collect from a site similar to your aquarium in water quality and temperature. The book "Fishes of Missouri p.320" by Pfeiffer describes the Orange-throat darter as follows.

"A moderately stout darter (1.2-2 inches) with 6-10 indistinct dark cross bars on the back; Sides often prominently streaked by dark horizontal bars. Its life colours are as follows: back mottled yellowish-brown with indistinct dark colour cross bars. Sides lighter brown, often with narrow blue-green vertical bars best developed towards the tail. Breeding males have VERY brilliantly coloured sides with a series of blue-green bars alternating with

brick-red bars. Gill membranes bright orange (thus the name 'Orange-throat') with the remainder of the undersurface of the head blue-green. The fins are variously banded and spotted by blue, green and red."

With that generic description I hope you can begin to imagine the beauty this little fish possesses. When you combine his looks with his lack of shyness you can see why I place him first on my list of Darters! Often other Darters cover and are hidden from the eye. The Orange-throat is out for all to see, fighting for food and territory in a fascinating way. Why more than once I've seen an Orange-throat rise to the top and steal a morsel of food from a fish 5 times his size!

Now with the basic definitions out of the way I can share with you how I treat my Darters. When wild caught I immediately place them in a tank with a few feeder Guppies. By observation they quickly take eating frozen food of all varieties. Mine seem to prefer Bloodworms but will take most anything even flake food. Once I am confident they are eating properly and appear to be thriving I place them in their permanent homes, one of my large community tanks. Then comes the most fascinating part for me, the waiting to see which Darters possess the right mix of temperament, colour and tolerance to domestic life to make it to the brood stock category! When I have identified likely candidates I pull them aside and "winter them over" in an area that holds a temperature of 60° or less over the winter. In my case that is the laundry room of my walkout basement, for others that might be your basement proper or your garage. Then I begin to observe because in no time (3-5 weeks) boldly coloured males establish territories and court females. I put 2 trios in a 20 gallon tank with some steady current and keep my eyes open. Sooner or later the male will coax a female into

The Orange-throat Darter

(continued)

his cave (either rocks or small flower pots) and they will spawn, laying several hundred eggs. These eggs will adhere to whatever they hit. Here's the catch, you must watch your fish carefully or they will eat their eggs!

As soon as I realize a spawn has occurred parents and eggs are separated. In 7-10 days you will notice the fry appearing. They are a very durable fry and generally easy to take care of. They will grow fast if given proper food and care. Mine will often take live Infusoria early (six times a day!) then frozen baby

Brine Shrimp (three to four times a day) then finally blood worms (twice a day).

I hope this brief article has created a future interest in American Native fishes. If it has, I welcome your questions or comments! I also recommend these resources: "Petersons Field Guide to North American Freshwater Fishes" by Larry Page, or check into the fish club — North American Native Fish Association (NANFA) 2213 Fryania Circle, Navarre, Florida. You can also contact me through e-mail ... Robert_Rice@Oblique.org

The Green Guide To ... Not Showing Fish

by Nora Green, Tameside A.S.

There are two kinds of Aquarist, those who keep fish to boost their egos and those of us who keep fish as pets.

Now I suppose is the time to come clean: I may have a better fish at home. But unless someone told me I wouldn't know, and that isn't because I haven't looked at it for a few days. I spend far more time talking to my fish than any of you show people; even though they can't talk they answer me. I do my best to see the fish are kept in the best possible condition because Hubby hates the food so I don't pollute the tank.

The opening line of the article asked, "Why disturb your planted aquarium? Why indeed? When you have as much trouble as we do trying to get plants to grow because the fish keep pulling them up; or some kind person gives you plants that are full of snails. The last thing we need is Hubby charging around the tank with a net pulling them up.

There are other reasons for not showing fish. One is that it takes ages to catch them; then even longer to re-

plant the tank. Another reason, Hubby swears I always want to take the one I know will be the hardest to catch. Not true. Yet another reason — when Hubby has caught every fish but the one we want, he loses his temper. In turn, start 'tutting' or stand with 'that' look on my face which annoys him even more. After which, off we go in the car with our showfish to enter in our Club's Table Show, me trying to hold the tank steady on my knee getting soaked because Hubby has left the black tape at work and appears to be aiming for all the potholes. I can't complain because I'm not speaking to him.

We arrive late, wet, because we like to keep our family problems private, we grunt at each other. I unwrap my precious Gourami, inspect his competitors on the Show bench only to discover they are all Cichlids.

Another reason I at least can be heard saying, "I've got a better one at home" is because it doesn't half get

The Green Guide To ...

(continued)

some men going, they hold in their beer-bellies, smooth down the two strands of hair and snap, "Then why isn't it on bloody bench?" In fact I'm sure the reason why most men strive to attain perfect bodies on their fish is to make up for their own shortcomings. If they can't have the body of Arnold Schwarzenegger, they'll make sure their fish do. I — looking a bit like Jerry Hall (just a little shorter and wider if I don't breathe out) — feel I can criticise the way some men spread out.

After years of waiting until we had the correct fish, I do now enter my fish in Club Table Shows. The Table Shows were always for fish we didn't have, like Rasboras; we had some similar but the card in the shop said, Harlequins. Another breed they always ask for are AOVs; even in the bestest shops I've never seen any of those.

Now having won quite a number of Firsts with my fish, (two actually, and in one Show there were at least two other fish competing that evening) I must admit it does give you even greater incentive to try harder. But then I only enter our Club Table Shows, The Committee and I have an unspoken agreement, that it would be far too embarrassing for other club members should I win in public. It isn't my fault that I have a demonstrative nature, run around kissing everyone shouting, "We won, we won!!"

I also disagree with the advice given in the article about speaking to the Judges. The last time I moved a few chairs to get into the middle of the tables, I was pounced upon by millions of fish men. All I wanted to do was to ask the man a few questions about the fish he was judging.

As for talking to exhibitors, when I tried to have an intelligent discussion about one of my fish, naturally I'd left it at home (but it was as good as his) he had the effrontery to say my fish were stupid and like their owner had no brains. I don't mind being called stupid, in fact people are always saying I'm stupid, but I will not tolerate anyone calling my fish stupid.

I attempted to follow the writer's advice about travelling to Shows together but how is it that everyone I approach never appears to be going to any of the Shows I want to attend, yet when I arrive I see them in the distance? In fact, I bring such a star personality of my Club, the coach delivering members to the Disco at B.A.F. one year did a detour to pick me up. The problem was, I wasn't informed until two weeks later. I can't believe that everyone in the Club accidentally forgot to inform me the coach would pick me up! But they did ...

I do agree however, with training your fish. To make our fish easier to catch we feed them on Bloodworm from a net. This way, as soon as the net enters the water they associate it with food and swim towards it. But it would seem my fish are more intelligent than other fish, they also appear to be able to tell the time; because should that net enter the tank when it isn't feeding time, all the fish disappear.

And finally, there is one more reason why I don't show fish; the most important of all ... I do not agree with the way fish are measured. In fact I'd go as far as to say, I think it's the most stupid idea I've ever heard. You don't cut a human's feet off to measure him. The tail stuck at the end of the body belongs to that fish, so why not include it in the measurements???

In the meantime if you show people beware. One day I shall bring out my Tarquin and shock you all.

Our Roving Reporter

A Passage to India

Dawn arrived a little late the morning I left for Heathrow. It had been raining most of the night and had left a leaden sky over London. The weather rather matched my mood; getting up in the middle of the night is never a good start for me. I began to wonder why I had left so early, my flight did not take off until 16.30 but I still had to pick my tickets up from the bucket shop and say goodbye to my friends on the way. You never know, I may not make it back!

Why is it do you think that out of all the cabbies in London, you have to be picked up by a guy who quizzes you on where you are going? I heard myself trying to explain that my Editor had sent me to India to find and report on the fishkeepers of that great continent. "What tropical fish we keep in tanks". "I once had an uncle who lived in Wembley who kept fish but his were all red, could not see the sense in that". The cab duly joined the traffic jam on the M4 and I thought "Great, getting stuck with a cabby who couldn't stop talking about his Uncle Bob!". By the time we had driven up outside the Terminal, the cabby (whose name was Jack by the way) had turned the subject around to roses and was telling me about his Uncle Bob's lost stand. Uncle Bob it seems defended his roses with a shovel against the mighty hordes of United fans going to the Wembley Cup Final.

Having given Jack a rip, my mind turned to the job in hand — where was my checking-in desk? Look at all those people, I wonder were they all going? Well, I soon found out! I was at the end of the queue of the Air India flight to Bombay. Time to go for a coffee, I thought, since there might be quite a wait before they get to me and somebody has to be last, and what would it matter? I had pre-booked my window seat.

John Edwards goes a'wandering

As I sat sipping coffee my mind slipped back to Jack the cabby and the subjects that man had covered. At one point we had turned off the motorway to avoid the tailback and had been passing through Hounslow at the time when Jack had brought the subject around to bad linen; it appeared that Jack had a fancy for black satin sheets. This in itself was unusual, but it appears that the only way to buy them is through a dubious Mail Order business who specialised in blow-up dolls. "Crash!" I suddenly woke up from the slumber that I was in and found myself staring at a prostrate man who had tripped over my outstretched legs, funny-looking guy. He had one of those Friar Tuck haircuts and was wearing a safari suit. We apologised to each other and left to go our separate ways, me to my flight to India and he to the wash room to remove the coffee, milk and sugar from his trousers.

It always surprises me how far fellow passengers will push the hand luggage limit, as I boarded the Boeing 747 I had no doubts that I would find place suitable for my small overnight bag in the overhead compartment. As I made my way to my seat I began to wonder! Looking down the aisle, the plane took on the look of a flying Dixons', people were trying to force all sorts of electrical goods into any space available. The cabin crew were running around like mother hens trying to bring about some sort of order. One particular person was trying to force a very large television set into the overhead compartment, having got it well and truly jammed he proceeded to take his seat.

I looked on from the security of my position by the window, having placed my bags out of harms reach. We were ready, the crew made the final check, all seat belts and overhead luggage were secured or were they? The stewardess had stopped alongside the TV set "Whose is this?" she asked. Nobody moved, the stewardess was

Our Roving Reporter

(continued)

joined by the co-pilot who proceeded to explain that we would not be taking off until the offending article had been removed to the hold. This had the desired effect and after a delay of only half an hour we were rolling down the runway whilst I sat back in my seat and stared out of the window. Have you ever looked out of the window on take off and watched how the wings seem to lift off before the body of the jet leaves the ground?

The first few hours of the flight were uneventful and it was not until the stewardess started to bring around the menu did I realise that the mid-day meal would be a traditional Indian or Western meal. I quite fancied a traditional Indian meal, but would they serve lager? "No" I would stay with what I had and besides it was a long trip — plenty of time to sample the food when I get there. The meal was served and luckily the guy who had the seat next to me had the Indian, so I could see what I had missed. Peter introduced himself and we had made some small talk before the meal had arrived. It transpired that Peter was employed as a Quality Controller by the Little Chef chain of restaurants and it was his job to go round and test the quality of the food and by the look of him he enjoyed his job. As I dropped off to sleep I could still hear Peter negotiating with the stewardess for a second meal.

I can never sleep on planes and this was no exception. I had woken up several times and tried to watch the in-flight movie but to no avail, one's view was obstructed by passengers toing and froing to the toilet. I wondered if these people had the currys? Ice creams were served, Peter had now established an understanding with the cabin crew who were now supplying a double helping of everything on the menu.

The service had now been extended to me and I soon drifted off to sleep

dreaming of eating a mountain of ice cream whilst riding on a flying carpet.

I must have slept for hours, it was only the noise of the flaps going out that woke me up, the seat belt sign came on and you could feel that the plane had begun its descent. Time to make use of my window seat, looking out you could see the City of Bombay below. From my advantage point you could see that Bombay was built on islands, I latter learned that these were the islands of Salsette and provided the only deep water port on the west coast of India. As you can see, we all got down in one piece, duly passed through immigration. I had no need to join in the frantic search for suitcases and wandered off to see if our inter-connecting flight to Madras had been on time. Would you believe it? According to the flight board we were leaving Bombay in two hours time. I checked in and waited to go on my next stage of my journey.

My attention was drawn to a young Indian lady dressed in traditional costume making her way through the western passengers; as she left them, you could see it was not good news. It was explained to me that the plane departure had been delayed while an investigation was carried out by the airline regarding the loss of a large television set which had been mislaid from the hold. It seems that the owner was a regional government official who was not leaving until it had been found, and nor were we. As the hours passed the sky clouded over and the rain started to fall, in no time at all large puddles started to form. These grew big, in the end, one big lake had surrounded the airport buildings. Over the airport address system came the announcement that all flights were suspended for the foreseeable future. Time for a beer I thought, the bar was not far away and it was not long before I was sinking my first 2001.

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Choosing your next Sea-Anemone

Many hobbyists' first attempt at keeping marine fish involves the keeping of Clownfish. Most are colourful, they have an interesting swimming motion, they are inexpensive and they are relatively hardy. Soon, many of these same people decide that their Clownfish need a Sea-anemone. This is where many aquarist meet with their first failure. They find that even given good water conditions and good lighting their Sea-anemone still dies six to eight months later for no apparent reason. If the sea-anemone does live, they may find they have a healthy Clownfish and a beautiful Sea-anemone and neither one will have anything to do with the other! In this article, I hope to give you some information that will help you to avoid these problems. When discussing Sea-anemones I will give the scientific name first and then as many common names as I can; first I'll offer you some general anemone keeping tips.

General

The degree to which you are successful in keeping Sea-anemones may depend a great deal on your ability to choose a healthy one from the dealer's tank. This is easier said than done. Some things are pretty obvious; Sea-anemones with open, loose mouths, deflated tentacles, or torn bases should be avoided. Other things may be less obvious. White transparent colour in an otherwise healthy specimen may mean that it has expelled all its zooxanthellae and that it may be perfectly fine for up to 9 months before it gradually starts to waste away. Short stubby tentacles on a Sea-anemone that is supposed to have long thin tentacles may mean it has already started to decline. If the Sea-anemone is not attached to anything in the dealer's tank, it may have difficulty attaching to something in your tank and probably won't survive long. Watch as the dealer removes your Sea-

anemone from his tank — if the anemone doesn't contract a little or react in some way, it is not a robust specimen, sadly, if the Sea-anemone is not at least a little sticky to the touch, it may have lost the ability to fire its stinging cells (nematocysts), which means it will be difficult, if not impossible, to feed.

One of the unfortunate things about many of the hard-to-keep Sea-anemones especially, is that they seem to have a very slow metabolism. They are very slow to let us know that they are unhappy and by the time we notice, they may already be too far gone to help to help them since they are slow to react to beneficial changes too.

Clownfish host anemones all need lots of light to do well. They obtain most their nutrition from a symbiotic algae (zooxanthellae) that lives inside their tissues. Lots of light means from 3 to 5 watts of bulb per gallon of a standard depth aquarium. That means you need at least 4 of the longest bulbs that you can fit over your tank, usually in a ratio of 50% actinic and 50% full spectrum bulbs.

Anemones prefer water free of organic wastes, which in most cases means you need to have an efficient protein skimmer. Maintaining the levels of trace elements in the water by performing regular water changes or the addition of commercially-available supplements also seems to be important.

Moderate current, in addition to clean water, helps exchange needed elements and rid the anemone of waste products. Some of the more delicate anemones seem to prefer higher temperatures in the range of 78-80°F and pH in a consistent range of 8.2-8.4.

Feeding your Sea-anemone

Feeding can range from 3 times a week to once every 2 weeks. Some aquarists have had success not directly

Choosing your next Sea-anemone

(continued)

feeding their anemones at all, although I suspect their anemones are capturing food that is meant for the fish. Food usually consists of a piece of raw Shrimp about the size of the anemone's mouth, aneifish, Silversides, Clams, Scallops and other frozen marine organisms can also be used, but I find them more messy. A large bag of peeled and de-veined Shrimp can be obtained from one of the local supermarkets and may last many, many months and has the added advantage of being fit for human consumption!

Liquid foods and Target foods may actually be harmful to your anemones directly and indirectly through degradation of your water quality.

The jury is still out on vitamins. My suggestion would be to use them sparingly, or not at all.

Easier to keep Sea-anemones

Stichodactyla haddoni Saddle Carpet, Saddleback Anemone, Haddoni Anemone

This anemone is often not distinguished from our Carpet Anemones in the dealers tanks. The tentacles are short and knobby and usually densely packed. There is usually a reddish to pinkish ring around the mouth that isn't present on others. Groups of tentacles on the same anemone may be different colours forming a striped pattern. If not striped, they are usually a greyish-green, although bright greens, yellows and even blues are sometimes seen.

Good points: This may be the easiest anemone to keep for long periods of time. Light suitable for soft corals and commonly kept hard corals is enough. I have had one growing slowly for over 7 years in the bottom of a 30 gal. tall aquarium with only 60 watts of fluorescent light. Reasonable nitrate levels for fish seem to be OK for this anemone. For its first 3 years my anemone lived in water that measured 30ppm of nitrate and showed no ill effects. They will grow faster however given better conditions.

Bad Points: This anemone will eat your fish! (not your Clownfish) Dwarf Angels, small Tangs, Blennies and small Shrimp seem to be prone to getting eaten. *Pseudochromis*, Hawkfish and some *Acanthurus* don't seem to have a problem. The Clownfish that accept this anemone also seem to be limited to Saddleback Clowns, true Sebaste Clowns, Clarkei Clowns and usually Tomato Clowns.

Entacmaea quadricolor Bulb, Bubble, Bubble-tipped, Maroon Anemone

Recently-obtained individuals will usually have unmistakable swollen ends on the tips of their tentacles. Specimens in captivity will often lose their bubble-tips for periods of time and just have long straight tentacles. The tentacles usually have a green colour especially when exposed to only actinic light. The tentacles may also have a frothy white ring around the tip. The base is often rusty-red but may also be purple or just tan. The Rose anemone is a colour variation of this anemone.

Good Points: Normal reef lighting is enough (above 4 watts per gal.) for this type of anemone and may be more than enough. Nitrate levels below 20 ppm are preferred. Small ones may reproduce asexually in your aquarium by dividing into two smaller anemones. Their sting is rather weak and won't harm your other fish. They are accepted by Clarke-type Clowns, all the different Tomato-type Clowns, Maroon Clowns and sometimes, although very rarely, Percula and Ocellular Clowns.

Bad Points: These anemones tend to wander around the tank more than others, sometimes causing their own deaths from lack of light or being sucked through a powerhead. They like to have their foot shaded inside a crevice in the rock or coral with their tentacles in the light. This preference might be met by placing a short piece of PVC pipe, similar to the anemone, where you want the anemone to stay and putting its base into the pipe. They

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seem to be sensitive to being shipped. Make sure the one you pick out has a tight mouth and is firmly attached to something in the dealer's tank.

Macrodactyla doreensis, long-tentacled Anemone

These anemones have very long (up to 5-6"), smooth, thick tentacles sometimes with longitudinal stripes extending into the oral disk. The tentacles originate from a round flat oral disk, distinguishing it from the *Condylactis* anemone. The foot of the base is almost always bright red or orange.

Good points: They are hardy if kept under Metal Halide lights. Under lower light levels they seem to slowly waste away. They come in a variety of patterns and colours including purple. Accepted by Clarkei Clowns, Tomato-type Clowns and Pink Skunk Clowns. **Bad Points:** They must have bright lighting. They normally live with their base buried deep in the sand and sometimes have a difficult time finding an attachment spot in a reef-type tank.

Difficult to keep anemones *Heteractis crispata* or *H. malu*, Sebae Anemone, Singapore Anemone, Pink-tipped (but not *Condylactis*) Anemone

Tentacles range from long and thin to short and fat depending on the condition of the anemone (short and fat usually means it is starting to waste away). Tentacles usually have magenta coloured tips although yellowish-green tips are not uncommon. Colours can be dyed yellow, dyed pink, natural pink/purple, natural yellow, tan, but by far the most common is pure white. The oral disk may also have a green sheen under actinic light.

Good Points: they are very common in stores and are usually the least expensive of the host anemones. They are accepted by virtually all Clownfish whether they occur together in nature or not. Some not so white specimens can regenerate their symbiotic algae thus becoming a brown colour. If you

can obtain a tan specimen with long thin tentacles they should do well under conditions similar to that required for Bulb Anemones.

Bad Points: No one I have spoken with, not even the public aquariums, can keep the white or yellow ones alive for more than 6-8 months, only two stayed alive for over one year. Both of the Anemones were tan in colour either when purchased or had turned tan shortly thereafter. One thought is that Sebae Anemones may expel their symbiotic algae shortly after capture and when it is completely gone it is not easily replaced. Frank Greco of the New York Aquarium says that he has been successful in getting otherwise healthy Sebaes to 'colour up' by feeding once a week with fresh fish, Clam, Chrimp or gelatin. They also get live Brine Shrimp, adult and baby, and a yeast-based diet of his own design. In addition to the frequent feedings, the Anemones are exposed to very bright light, three 400 watt metal halide bulbs over the 6' x 6' x 4' tall anemone tank. If the anemone is not able to replace its zooxanthellae it is doomed to a very slow starvation once in the tank. There are cream-coloured Sebae Anemones found in shallow water in the wild, but they are not the transparent white colour found in dealer's tanks. These don't seem to be a good beginning anemone despite articles I have read that say they are.

Heteractis magnifica, Ritteri, African, Yellow-tipped Anemone

This Anemone is usually rather large. Their tentacles are long with very blunt tips that are lighter in colour than the shafts. The base may be red or purple but brown is more common.

Good Points: They are relatively common in the market. They are accepted by almost every variety of Clownfish.

Bad Points: They tend to move to the highest point in the tank, often up the sides of the glass very near the water return pipe. In nature they tend to be found at the highest parts of the reef

exposed to strong light and currents. In the aquarium they will need very strong lighting (metal halide) and very strong alternating (wave) currents to do well. They also have a reputation for being able to catch and eat medium-sized non-Clownfish.

Stichodactyla gigantea, Giant Carpet, Coloured Carpet

These Anemones have short, pointed tentacles that seem to constantly vibrate. The tentacles are usually not very densely packed except near the edges of the disk. Specimens with blue, bright green, yellow, or white-tipped tentacles can be found and at some times of the year are even common, but light brown is still the most common colour. The oral disk often lies in a wave pattern if the anemone is on a flat surface.

Good Points: The coloured ones are very pretty! They are accepted by most Clownfish.

Bad Points: They can sting non-Clownfish and may even eat other Anemones. Giant Carpets, unlike their relative the Saddle Carpet, seem to be very difficult to keep in captivity. One of the reasons for the difficulty in keeping Giant Carpets may stem from the fact that most are collected from very shallow water, sometimes less than 2 feet deep. This leads me to believe that it may be difficult to give the anemone all the light that it is accustomed to in nature.

References:

- Allen, G.R. 1972. *The Anemonefishes — Their Classification and Biology* -2nd Edition. T.F.H. Publications Inc.
- Allen, G.R. and Fautin, D.G. 1992. *Field Guide to Anemonefishes and their Host Sea Anemones*. Western Australian Museum, Perth, WA.
- Fruese, U. Erich. 1993. *Sea Anemones as a Hobby*. T.F.H. Publications Inc.
- Mose, M.A.Jr., 1992. *The Marine Aquarium Handbook-Beginner to Breeder-New Edition*. Green Turtle Publications.
- Sprung, J.1994. *Reef Notes. Freshwater and Marine Aquarium Magazine*, 17(8):22

There are a couple other natural Clownfish host Anemones that will sometimes appear in your dealers tanks, but I wasn't able to gather enough information on them to include an accurate description. These are the Sand, Corn or Aurora Anemone, (*Heteractis aurora*) and the Martin's Carpet (*S. mertini*). Some Clownfish will also accept non-natural hosts such as Purple Mat Anemones, Reef Anemones, Condylactis Anemones, Gonipora Corals and other Long Tentacled Corals. There have been reports, however, that Clownfish that associate with *Condylactis* Anemones and corals may be more prone to skin infections than normal.

Closing

The more Anemone keeping experiences we can share the better. The more we can communicate with each other the more success we will all have. After many failures with sebae anemones, I have used information gathered from other hobbyists to choose a Sebae Anemone with a green oral disk and tan tentacles that has grown from 6" to 12" in diameter in 7 months.

If you disagree with my findings I would really like to hear from you. If my findings agree with your experiences, I need to support some of the opinions I have already formed. You can reach me by e-mail at phender@cellogina.calstate.edu

Poecilia reticulata endlers — The Dwarf Guppy

by David Marshall, Ryedale A.S.

BACKGROUND

Poecilia reticulata endlers is one of over 150 ovoviparous (prior to birth the fry receive nourishment through egg yolk and not through the trophotaenia system used by true viviparous fishes) livebearing fishes grouped into the *Poecilia* family. It looks, acts and behaves like a Guppy, *Poecilia reticulata*, to such an extent that it appears to be a sub-species of this very popular fish and at the present time is thus classed as *Poecilia reticulata endlers* but, as you will see, there are slight differences so it may be that in the future this fish will be given a different classification within the *Poecilia* family.

The wild location of *Poecilia reticulata* is not clear. This fish first arrived in the U.K. in the early 1980's and at this time was a fish which was available mainly to the members of specialist livebearer groups and was known under the name of Endlers Livebearer. As aquarium bred stocks of this fish have increased so has the availability and it is starting to become a more regular sight in the tanks of aquatic retail outlets where it is sold under the trade name of Dwarf Guppy and this is the name which will be used in the text of this article.

Any tank which contains a group of Dwarf Guppy is a tank to behold as these are lovely little fish which are always active and need no special requirements in order to reproduce.

DESCRIPTION

Thankfully commercial fish breeders have yet to turn their attentions to changing the body colours and fin shapes of the Dwarf Guppy so the fish seen for sale in aquatic retail establishments greatly resemble those first seen in the U.K.

The background body colour and fins of both the male and the female Dwarf Guppy is olive. The female has no foreground body colour. The back-

ground body colour of the male is a myriad patchwork of dark green, black, purple, red, orange and blue and it is amazing how such a small body can hold so many colours. The fins of the male are short-based. The dorsal fin is pointed and can reach back as far as the caudal peduncle (the last area of body prior to the caudal fin) and the colouration here is often a mixture of sky blue and orange. The caudal fin is forked in appearance but in reality these forks rarely extend out of the olive background. The forks are orange in colour and a good show fish has forks which are of an even size. The anal fin of the male is modified to form a gonopodium.

The F.B.A.S. Fish Size Guides give the size for male Dwarf Guppies as reaching 25mm (approx. 1") in total body length and the female 35mm (approx. 1 1/2") in total body length. Males or females seen for sale above the quoted sizes should be avoided as there is always the chance that these may be the result of crosses with the normal *Poecilia reticulata*.

AQUARIUM CARE

Due to their small size there is no special requirement when it comes to choosing a tank in which to house these fish. A 24" x 12" x 12" (60x30x30cm) tank will easily house a small breeding group of between twelve and fifteen (two females for every male) Dwarf Guppies. As long as regular water changes are made filtration in such a small tank can be minimal eg. sponge filter. Like all *Poecilia* species these fish prefer to be kept in hard water with a pH between 7 and 8. Keep the temperature around 76°F (24°C).

House in a well planted tank as this gives the adults a sense of security, provides shelter for any females hounded by the constant attention of the males and provides shelter for any unexpected fry. Dwarf Guppies are an

The Dwarf Guppy

ideal fish to add to a well planted tank as they will do no damage to even the most delicate leaved plants. To highlight the colours of the male Dwarf Guppy use a dark tank substrate, dark rocks eg. coal and small pieces of simulated bogwood.

Dwarf Guppies are usually kept in a single species tank but will mix happily with small Rasbora, Pencilfish and small Loach or Carfish species. To avoid the chance of cross breeding do not mix any other *Poecilia* species with Dwarf Guppies.

All the standard commercial foods are readily taken by this fish, but remember they have very small mouths. Live foods are beneficial but not essential to their well being. Although many fish will refuse microworms after they leave the fry stage of their lives these fish never lose their love of this easily cultured food.

BREEDING

As with all *Poecilia* species no special care or conditions are needed in order to get the Dwarf Guppy to breed. These fish are sexually mature at around three months of age. The males are constantly chasing the females in the hope of mating and in a tank with a dominant male the sub-dominant males will 'sneak breed' at any given chance.

As with all oviparous livebearers the male transfers milt through his gonopodium into the body of the female. The female stores this milt in her body and at intervals of four weeks (the female does have the ability to destroy this milt should she breed with another male) uses this milt to fertilise eggs within her body. She retains these eggs until they begin to hatch and then releases what are in reality (if very stressed she will release eggs and/or dead fry) miniature versions of the adults. A few days prior to the release of her fry the female takes on a very rounded appearance and the area around her anal fin turns a deep black (gravid spot).

When a normal female *Poecilia reticulata* releases her fry she will release them all within a couple of hours but this is not usually the case with the female Dwarf Guppy and it often takes several hours for a female to release all her fry. Remember that brood numbers increase as the maturity of their mother increases.

Dwarf Guppies are not as quick to eat their own fry as many other *Poecilia* species and the stronger ones from each brood usually survive long enough to be caught by the fishkeeper and moved into a separate tank or breeding trap until they are large enough to be returned safely to their parents tank. To save a whole brood either move the female to a separate tank (which contains either real or plastic plants in which the fry can hide to escape the attentions of their mother) or into a breeding trap when she locks close to releasing her fry.

The fry of the Dwarf Guppy are very strong and hardy. Given good feedings of microworm, brine shrimps and a good quality fry food they grow very quickly and within a few weeks can be returned to their parents tank. Remember that if the fry are given a small tank of their own they will grow faster and stronger than if confined to a breeding trap. Dwarf Guppies breed true so the young males and females are miniature versions of their parents and in this respect can differ greatly from the mixed fry often seen in broods of the normal *Poecilia reticulata*.

For a few generations it is possible to inter-breed within what is basically a family group and still produce good quality fry but females from outside this is group should be introduced at regular intervals as otherwise the quality of the fry produced will start to fall.

If you are looking for an interesting livebearing fish give the Dwarf Guppy a try.

Popular Fish Families

Terry Waller starts a new series of looking at popular Fish Families

One of the great dangers, or temptations, in the fishkeeping hobby is the 'impulse buy'.

The average guy with his tank at home wanders with son, into the local shop for this week's Daphnia and a bit of weed but when he gets home he finds he has bought a fish that has taken his fancy or 'Mum will like it Dad, go on, treat her.' He has no knowledge of what he has bought and has even less idea of where he's going to put it. (This is how we all acquire other tanks!)

I've seen some nice tanks of neons, barbs and Corydoras totally disrupted by some colourful 'cute', big fish that totally takes over the tank. The moral is, of course, NEVER buy any living creature for your aquarium before 1. Properly identifying it and 2. Referencing it out as to its suitability for your tank. But back to the shop.

Reading the tank label it says 'Upside-down Catfish £5.50p'. This is your introduction to, at best, a problem or at worst, a nightmare. The 'Synodontis Catfish' — not all doom and gloom, read on.

SYNODONTIS

A difficult fish for the beginner or less-experienced aquarist but avidly sought after and patronised by many experienced and knowledgeable aquarists, and people who are selective.

Synodontis come into the Family Mochokidae which is part of the Siluriformes - Catfishes. They are confined to one continent - Africa - but are spread far and wide; in fact, you will find them all over Africa with the exception of the desert region of the far north. They live in deep water, usually sluggish-flowing where the light is poor — hence their understandable tendency towards nocturnal habits in the usually well-lit, domestic aquarium. All the major river systems, the Niger, Zaire and Nile all carry great populations of species.

You may find that Synodontis are often termed 'Upside-down Catfish'. This is not wholly true; certainly when they lead they often adopt an inverted posture feeding under logs, caves and, at times, the water surface. A few species, *Synodontis nigricornis* and *S. nigrita* included, do spend a lot of time in the inverted swimming position but most others only turn over when hunting food.

S. nigricornis is a most desirable fish: small, peaceful, colourful and interesting with its strange swimming attitude. It's also plentiful, being easily available, something which cannot be said of the other 100-odd species in fact, until about 5 years ago the choice of Synodontis was pretty limited with only *S. nigricornis*, *S. nigrita*, *S. schali* and sometimes *S. schoutendani* ever appearing in shops. Now, of course, everything is different with lots of species making regular, if rather expensive, appearances. Let's take a look at the fish.

A big percentage of the fish are rather large with a deep, solid body, fairly tall in colour (who needs bright colours in dirty muddy water?) and unfortunately in most shops showing a lot of damage and scuff marks. However, there are exceptions in all fish families and here we find a few more elongate, slender species: *S. schoutendani* for example and at least two, *S. brichardi* and *S. alberti*, that could be mistaken for being starved, they are so thin. Also, there is *S. polli* and *S. angelicus* that are just simply beautiful to look at.

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Popular Fish Families

(continued)

A *Synodontis* is smooth-skinned, carrying no scales at all, but it does have a kind of hard bony hood that protects the vital front end, the head. It has all the regular fins plus a long-based fleshy adipose fin that stretches from the posterior of the dorsal fin to the caudal. Some species display long extensions to the dorsal and caudal fins, this is very apparent in *S. eupterus* a very common 'Syno' from West Africa.

The front end of the fish is very interesting, large eyes (but poor eyesight) is compensated for by three sets of 'feelers' or barbels around the mouth which act as locators in the murky depths. Sometimes these feelers are branched and at times very long indeed — *S. alberti* has feelers that stretch back further than the caudal fin. The inferior mouth is located under the head hence the often adopted upside-down feeding action. The feelers are equipped with sensory tasting cells and serve no other purpose than locating edible items, physical location and navigating in murky waters being better served by the sensitive lateral line system.

Habit-wise, *Synos* are quarrelsome amongst themselves with a definite pecking order when kept in numbers in the same tank. Some are really good community fish adding interest to the home aquarium; you can do not better than acquire a couple of *S. nigricornis* or *S. contractus* which, whilst they will set you back a few pounds, are really nice, safe fishes.

I have, at this time, no account of *Syno* breedings or reproductive details. We know of one species, *S. multipunctatus*, that lays eggs, Cuckoo-fashion, amongst Rift Valley Cichlid eggs but other than that it is all rather vague. Sexing, also, is almost impossible with no outward sexual differences being apparent.

Certainly, if you get the urge to keep these fishes you must go in for a moderate to large aquarium — 48" x 15" x 12" is O.K. but 60" x 18" x 18" is better — and furnish it with wood, rocks, drainage pipes, large flowerpots, in fact, anything that makes a 'cave' or hideaway. Plastic plants can brighten up the aquarium, *Synos* will only dig up the real things!

Synodontis are one of the hobby's great character fishes that need an aquarist who will apply commonsense to the well-being of these creatures; care over environment and feeding are crucial but master these important factors, and you will be well-rewarded.

Fourteen Ways to Kill An Aquarist Society

The following appeared in T.F.H. The author is unknown

1. Don't attend meetings, but if you do, arrive late.
2. Be sure to leave before the meeting closes.
3. Never have anything to say at meetings; wait until you get outside.
4. When at meetings, vote to do everything and then do nothing to help.
5. The next day, find fault with your officers and fellow members.
6. Be sure to sit in the back and talk with another member. Nobody will notice.
7. Take all the organization will give, but give nothing in return.
8. Talk co-operation, but never co-operate.
9. Threaten to resign at every opportunity because others are talking too much.
10. If you are asked to help, always say you haven't the time — too busy.
11. Never read anything pertaining to the Society; you might learn too much.
12. Never accept an office; it is much easier to criticize than to do things.
13. If appointed to a Committee, never give any time to it — let the Chairman do all the work.
14. Don't do anything more than you have to, and when others willingly and unselfishly use their ability to help the cause, howl because the Society is being run by a clique.

None of the above applies to me or my fellow members of course, I just thought it would make some light reading.

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Have you Read?

When you start researching any subject, there are many titles when you want to ask the author of the book concerned 'Just a minute, what about ...?' All too often you have to turn to the back of the book and look for trouble-shooting tips. Well, now in a new book 'QUESTION & ANSWERS BOOK OF THE MARINE AQUARIUM' by Nick Dolin (Andromeda/Seacomander Books, £14.99) this chore is unnecessary as the author builds in question and answer spots as it goes along. In each chapter of the book (divided into three main sections — Setting Up, Fishes, Invertebrates) each double-page spread features authoritative text and illustrations, pertaining to the subject under discussion, interspersed with question and answers. So, if you get a bit bogged down with your technical point, it is more than likely that the explanatory answer is just a sideways glance away. This is not a book filled with over-technical jargon; indeed, some of the questions are quite simple, non-technical worries — Are the bubbles rising from slime algae dangerous? Will Starfish topple rocks? Can a bath sponge be used on an ornament in the marine aquarium? But, rest assured, most of the fundamental questions in connection with setting up, equipment performance-related, and health-care queries are answered comprehensively too.

Once the beginning section of the book is past (it deals with setting up the aquarium, equipment, water qualities etc.) the two remaining sections deal with Fishes and Invertebrates in a uniform manner. In addition to text and photographs, boxes give extra details on Tank Conditions and Care for each genus together with an expanded list of details within the group. Naturally, species for fish are more comprehensive than for invertebrates with Habitat, Tank Size, pH, Temperature, Ammonia, Nitrite, Nitrate, Specific Gravity, Water Changes, Filtration, Feeding and Health all being considered. Invertebrate details are limited to Habitat, Feeding and Health.

The quality of illustration, artwork and overall presentation is of the

highest category; to assist rapid location of information the top of each page is colour-coded and titled. All in all, a brilliantly-produced book which brings to reality an equally brilliant concept and one which only leaves you with two more questions (not answered in the book) — why hasn't it been done before? — and when is the next one coming out?

A new book just released by TFH is one that will interest Goldfish keepers, especially those who have breeding in mind. 'GOLDFISH BREEDING & GENETICS' by Joseph Smart & James H. Bundell (TFH Publications, £24.95) will explain (in some detail) the reasons that some many new varieties or strains of Goldfish continue to appear thousands of years since the first Goldfish was bred in captivity. It is quite possible for the fishkeepers to be able to reasonably predict what the new colour strain or finnage development might be — with the aid of this work, by two of Britain's experts in the field, you might even consider putting money on it.

The work is divided into approximately two halves (at least by this reader): the first contains the History and evolution of the Goldfish, the Varieties of Goldfish, Genetic Principles for the Goldfish Breeder and Goldfish genetics; the second part is, if you care to regard it that way, more of a practical nature covering Goldfish and their Aqueous Environment, Breed Stock Management, Development, Rearing, Culling and Selection, Showing and Judging and the Future of the Goldfish.

Of these two halves, the first is where some serious application of 'the little grey cells' is required, such is the depth of argument and detail of information. But by persevering, you will obtain a good grounding in genetics involved in producing the wide variety of fishes that fascinate Goldfish keepers so much.

The second half provides much more familiar territory as much of the subject matter will be almost second-nature to the experienced fishkeeper; nevertheless, it serves an admirable purpose in again providing excellent coverage of aquarium management where most of the action occurs within

Have You Read?

the well-controlled parameters of the breeding and raising aquaria.

One of the three Appendices tabulate Summaries of breeding information and records done by Matsui, the renowned Goldfish authority. Other Appendices provide reading lists and details of Goldfish Societies.

The illustrations are superb, the now taken-for-granted high-quality, laminated pictures almost leaping from the page demanding attention. This is obviously a book that needs to be (and will be) read many times, as each time you will absorb, and become absorbed, with the sheer wealth of information at your fingertips. It is destined to become the Goldfish Breeder's handbook for a long time to come.

Taking a trip beneath the tropical waves of the coral reef usually meant a long-haul trip and not little expenditure. Now, you can experience it all from the comfort of your computer chair with not even getting jet-lagged (or wet) in the process! Subtitled 'A Multimedia Expedition to the Rainforests of the Sea' 'WORLDS OF THE REEF' (Ransome Publishing £39.99) has an Introduction by David Bellamy to put you in the right, conservative, frame of mind to appreciate what you are about to discover on this CD-ROM.

Fittingly, before you dive in, you attend diving school, becoming familiar with the kit and diving

techniques first. There is a Field Centre and mini-Museum where you learn more about the animals and the reef itself than its off to the reef. There are several areas to experience, the Southern Lagoon, and a Mangrove swim; for the brave how about a Shark's cave or a night Dive, Mermaids and Manatees are also on the agenda, as are over 100 superb video sequences, 400 sound clips and narrated tours; 300 photographs and illustrations, a Scratchbook and print facility and a 'satellite link' to other reefs all add up to a complete reef experience you will revisit over and over again.

A new series of books just come onto the scene are entitled 'AQUALOG' and have been receiving excellent reviews. They cover the following species:

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Just what is this stuff we call

ALGAE? David Page, of Corby, thinks green and prepares you for next Spring

Several weeks ago, I was sitting up the top of the garden sitting under my leafy bower listening to the water trickling over the waterfalls, but unable to see the fish. At that time I had what can only be called 'Pea Soup' in both the large ponds. Incidentally, the small one which is not in the system was crystal clear, don't ask me why — I don't know, except it's not so deep and the plants were growing more vigorously (presumably there was less light loss in the shallow water) and using up all the

available nutrients — something which the algae was doing in the deeper ponds. However, they did eventually clear.

What is algae? answer — plants! The next logical question is — What is a plant? So sit back and read. Let's have a quick biology lesson. Perhaps those of you that did 'O' level Biology many years ago will know, or at least remember. I must confess to not being able to remember fully and have therefore had to look it up, i.e. do some revision.

Firstly what is the difference between plants and animal life forms? Answer: all living things can be divided into two groups — Plants and Animals.

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Just What is this stuff we call ALGAE? (continued)

How can you tell the difference and which group should a living thing be placed in?

Animals move about from place to place, whilst plants remain rooted to the ground. But always there are exceptions. Corals for instance remain fixed in place whereas some small algae species swim in the water. So just how do we distinguish between animals and plants? There are six rules.

1. The cells of plants are surrounded by a cell wall, which is made of a dead substance which is rigid. This is not so in animals.
2. Plants usually contain CHLOROPHYLL but this is not found in animals. Again there are the usual exceptions, bacteria and fungus do not contain chlorophyll. Green Hydra on the other hand does, being an animal containing it. However it is not contained in the cells of the Hydra, but in small round cells which are really tiny plants living between the cells of the Hydra.
3. Plants that contain chlorophyll are able to make their own food. They convert carbon dioxide and water into starch in the presence of sunlight. This food together with the minerals taken up by the roots is changed into more complex substances. Animals, however, cannot make their own food. They eat the foods that have been made by plants, either by eating the plants or by eating other animals that have eaten the plants.
4. Animals usually move from place to place in search of food, whereas plants remain in one place as they can make their own food.
5. Animals grow to a limited size and the number of parts of their body is fixed. Plants continue to grow since their size is not limited.
6. Growth in animals goes on all over the body. In plants there are special growing regions, which are at the tips of the roots or shoots, or just beneath the bark in the stems and the roots.

Plants can be divided into two groups: Flowerless plants that do not produce seeds and those that do. Algae fall into the first group and there are hundreds of plants within this family. They are simple in their structure, and nearly all live in water. Some of them are very big, although their structure is simple, but many are so tiny they can only be seen through a microscope. There are many kinds of pond algae, all of which play an important part in providing food for the other pond inhabitants. They are mostly one-celled, or thread-like, filamentous plants. They are usually found floating on the sunlit surface of the pond although some

attach themselves to rocks or the stems of larger plants. Many freshwater algae belong to the primitive group known as Cyanophyceae (Blue-green Algae), others to groups known as the Chlorophyceae and Bacillariophyceae. The latter includes the Diatoms.

Together with vegetable matter such as leaves that fall into the water, algae forms an important part of the food chain in all waters of the world including our ponds. Like all photosynthesizing plants they produce sugars by using the energy of the sun for their growth. This is then often eaten by animals, which derive their energy from them. Some of the larger algae contribute to this food chain indirectly when they die by falling to the bottom, where they become part of the debris, which provides food for animals such as Gammarus Shrimp as well as bacteria.

Starting at the microscopic end we find Diatoms which consist of either a single cell enclosed by a cell wall of silica, or a group of cells with their cell walls joined in various shapes, such as Asterionella joined in a star shape. Fragililaria and rectangular Tabellaria form zig-zag chains of cells whilst the Pinnularia has single boat shaped cells. All of these can only be observed with a microscope. Their skeletons fall to the bottom when they die. In some parts of the world their fossilised remains are found in deposits of thousands of tonnes. These are mined being called diatomaceous earths or more commonly 'Fullers Earth', they are used as ingredients in paints, polishes and toothpastes and industrial filters. There used to be a filter on the market for aquariums which used them as the filter medium, I don't know if it's still around. Diatoms can be found in aquariums from time to time. You know the brown film that appears on rocks and plants or occasionally on the glass? This is a deposit of Diatoms.

Sharing the surface with Diatoms you will find green algae, known as Desmids. These are also found on the surface of the mud forming a green film. They are also very variable in

Just what is this stuff we call ALGAE? (continued)

shape such as *Staurastrum* which have long, spiky projections, others such as *microsterias*, are smooth in outline whilst species such as *Desmidium* have the cells joined in short filaments.

Staying at the microscopic end we also find species which are collectively called the 'swimmers and rollers'. One of the simplest of the green algae in this group is known as *Chlamydomonas*. It consists of one cell, which is pear shaped and contains a large chloroplast, containing chlorophyll, which is used in photosynthesis. These very tiny algae are able to swim about in the water by means of two whip-like hair projections, called CILIA or FLAGELLA. Given the right conditions and bright sunlight they can multiply rapidly making the water turn green (my 'pea soup') in a matter of days. Many of these green algae band together in groups or colonies, all with very definite shapes. One such shape known as Volvox consists of thousands of cells arranged around the outside of a hollow sphere, usually held together by a strand of protoplasm. These colonies are about the size of a small pinhead and can just about be seen with the naked eye, under magnification they can be seen to move by slowly rolling along, and rotating as it does so.

Not all green algae are planktonic as those previously mentioned or colonial. Two of the Filamentous Green Algae which we are all aware of and curse from time to time are *Spirogyra*, which consists of tangled masses of long green filaments, which are covered in mucilage, making them slimy to the touch. They are often attached to the bottom but can also be found floating. A very similar-looking algae which we all love to hate is *Cladophora* or 'Blanket Weed'. It's filaments are not slimy but masses of tangled filaments and is always found floating. They reproduce by adding cells to the ends, if pieces break off these can quickly grow into long

filaments by this means. *Spirogyra* has another means of reproducing — two strands come side by side the mucilage sticks them together, cells produce bumps down the strands opposite each other. These lumps join the contents of these cells then shrink from the cell walls and round themselves off. Those in one strand pass into the other, where they join together and become surrounded by a thick walled cell called a ZYGOSPORE. These fall away and drop to the bottom in a dormant state until the conditions are right (next Spring) and we have a new growth of algae just when we thought we had got rid of the darn stuff! (A good reason to clear out the debris from the pond in Autumn).

Finally, Blue-Green Algae: these are amongst the most simple and primitive organisms living. They can be unicellular or colonial. Not only do the cell walls stick together but they can also be enveloped by a thick gelatinous envelope. *Oscillatoria* is a filamentous form, which grows as a blue-green slime on stones, or can be found moving about in the water. Other forms can be found in gelatinous masses floating in the water. This Blue-green Algae is the form which has been causing the problems in our reservoirs in recent years; if they increase uncontrollably they can choke the water system and cause anaerobic (oxygen deficient) conditions in turn these conditions allow the bacteria to increase rapidly which produce the highly toxic gas, Hydrogen sulphide.

So the best advice I can offer is control algae growths of whatever form by whatever way you are happiest with. Be it adding proprietary chemicals or mechanically by filtration, or by possibly the best way BY HAND. Bibliography: T.F.H., Modern Science.

aquarian by Dr. David Ford **aquarian**

Q. I am working on the design of a filtration system for my 172 gallon Malawian cichlid aquarium. There is a full under gravel filter run by a Ghost 3 pump. Also a Fluval 4 containing a coarse pre-filter and an external trickle filter (home-made). The trickle filter is filled media and powered by an Aquaclear 402. The trickle filter tower has a capacity of 15 litres (3.3 gallons). I am having problems controlling nitrates, presently they are over a horrific 100ppm! The fish are breeding and seem healthy. I also have problems with detritus, the Fluval 4 was introduced to help control this.

The new filter I plan to make is probably going to include a trickle filter because of its great efficiency. My new filter is going to be using plants to help combat the high nitrates. I would also like to include an anaerobic filter — what would the flow rate need to be and is there an optimum rate or is as slow as possible best? R.W.

A. Your various questions seem very relevant to the filter system you own, but in fact definitive answers would not help. Certainly the filter should turn over between 1 and 2 tank volumes per hour for efficient biofiltration. To anaerobically reduce nitrates to Nitrogen the flow rate is about 1 drop per second.

However, two other factors must be considered. First, any aquarium is a biological system which means it is unique. Since every tank is different, the filter system for one aquarium may not be adequate for another. You must run the system and check the nitrite (and ammonia if you wish) levels, improving if necessary the efficiency via faster or slower flow rates until a consistent zero reading is seen.

Secondly, if the water from the tap is very high in nitrates, then this source must be improved by using reverse osmosis or dilution with rainwater or distilled water etc. Obviously it is wrong to correct conditions after adding the water to the aquarium.

If the high nitrates are a consequence of a very active biofilter, then many other pollutants will be present, such as phosphates, chlorides, sulphates, often in organic complexes, plus proteins and many other biological chemicals. Your nitrate filter will be acting on just one of many

pollutants. The answer is to dilute everything, regular partial water changes with the pure water until the nitrates are well below 50ppm means everything else is diluted too.

Q. In order to get the water chemistry I require, I use a deioniser to purify my tap water. Since I live in an area with very hard water, the deioniser cartridges are used up very quickly. It occurred to me that, since the deioniser I use (which also has an activated carbon chamber to remove organics) claims to produce virtually pure water, it ought to be possible to recycle old aquarium water through it, add new electrolytes and then put it back into the aquarium. That way the deionising resins would have a much longer life since they would not have all the hardness to remove. I am sure there must be a flaw to this argument but, if a UPY steriliser was used to kill bacteria, it does not seem obvious. S.J.M.

A. Sorry, but your idea about deionising aquarium water will not work. The problem is that mature tank water is not just high in Calcium or Magnesium (which ion exchange resins remove or replace) but also contains nitrates, phosphates, sulphates, chlorides and many more. It is also a biological soup and many of these ions are actually bound (the correct term is chelated) with complex organic compounds. The organics may be adsorbed by the Carbon but this chemical will be saturated within a matter of hours and may then even release compounds back into the flow-through water.

If local water is so hard why not collect rainwater? Adding this to pre-boiled tapwater will give salt water. If stored over peat it will be positively Amaranian! Note that a reverse osmosis unit is cheaper to run than a deioniser even if the initial cost has been made. Otherwise, why not make use of the local hard waters... keep Rift Valley Cichlids or many of the livebearers, or change to Goldfish keeping!

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Season Ends On a Sad Note

As the 1996 Show Season drew to its close, visitors to the remaining shows were devastated to learn of the loss of two well-known aquarists, both of whom had earned deserved recognition outside of their own immediate areas.

Roger Crew, of Isle of Wight A.S., has this appreciation for fellow Society member **Colin Rumbold**.

Twenty-five years ago the Isle of Wight became a better and happier place when Colin 'immigrated'. He came to the Island to visit an Aunt who lived here, decided he liked what he saw and only went home again for his belongings and to resign his job. That was Colin — once he made a decision, he followed through.

In 1987 Colin joined the Isle of Wight Aquarists' Society. On Wednesday, 23rd October, 1996 the Isle of Wight became a sadder place when Colin died suddenly of a heart attack aged 49.

In many ways, the timing of Colin's death was particularly poignant. He was experiencing a particularly happy period in his life and it was when he would often have been busy preparing for the British Aquarists Festival in Manchester. This was the event in the aquatic Show Calendar which motivated Colin to show his fish. He had first exhibited there in 1984 and had been involved with numerous successful Society Tableaux. It was an event which he wholeheartedly enjoyed and worked tirelessly for. He was well known at BAF as one of the 'characters' in the aquatic world; almost everyone who met him had a tale of warmth and humour to tell of Colin's escapades during the weekend. Here is a (true) tale of the second year Colin visited BAF — the Tableau was being transported under tarpaulin and the Police stopped the vehicle on the motorway believing the entourage to be possible terrorists. Colin awoke from a deep sleep 'in character' and told the Police to 'go away' in brief, but nonetheless very explicit, terms!

The 'Joe Bunt' exterior which Colin very often exhibited was only a thin veneer to mask a true heart of gold. If anyone needed help or a favour, Colin would be at the head of the queue offering his services. He was a kind and supportive member to new and old hobbyists alike. Colin was a person who involved himself with the aquatic hobby because he enjoyed both the hobby and the people. This was exemplified by his involvement in 'Grocklemania'. He instigated the 'Thomas Crapper Award' which has been enjoyed by thousands over the years and spent hours pondering sedisic and ritualistic tortures for its competitors, who enjoyed every moment of them. The 'Thomas Crapper Challenge' will bring smiles to many who have participated actively or as a spectator. It was a part of 'Grocklemania' which always left people with tears of laughter and aching sides.

Colin was a member of the British Killifish Association for a number of years. He always enjoyed his *Natobrancheius*! Colin's knowledge and expertise within the hobby was diverse; although there is no single aspect of the hobby that he will be especially remembered for, he was a fount of knowledge and experience. If you were building a pond, he had many breeding successes, had founded a scheme for IOWAS members to log their own breeding successes (and failures) in order to help others, and many other aspects.

Colin was a mate in the true sense of the word and will be remembered for this.

We will all grieve his passing from us, but he will be remembered for the happiness and laughter he brought into our lives and his own zest for life in which we all basked. In short, Colin was a smashing guy who was loved by all who knew him.

Season Ends on a Sad Note

(continued)

Tommy Dukes, of Clyde & District A.S., was one of those aquarists whom, once met, was never forgotten.

Affectionately referred to as one of the 'Tartan Terrors' by aquarists (usually by those living South of the Border), he was a tenacious person — especially if you had promised him anything — seeming to pop out of the scenery at any moment to remind you of the fact! He did not confine his fishkeeping interests to his own land but forayed south on many occasions — Tyne, Yeas and Manchester areas knew him well and one one occasion he even graced the portals of Alexandra Palace in London with his presence.

They that bad news travels fast but, in Tommy's case, a few weeks were to elapse before the aquatic world (even in Scotland) learned of his tragic passing from a brief, and suddenly diagnosed, illness. It is to be hoped, despite lateness of the news, that aquarists will still share our grief in remembering him and to extend our condolences and sympathy to his wife Ann, and to Scottish Societies' members who have lost one of their 'characters'.

Most Societies have a Couples Membership Scheme but it is also not unknown that should one long-serving partner cease to be a member the other 'half' soon participates less in Society activity. **Marjorie Pratt, of Hounslow A.S.**, proved to be an exception for although it must have been around 20 years ago since she lost her husband Bert, she remained an active member of Hounslow as a practising aquarist — even taking Best in Show, with a Labao, at the Society's recent Closed Show a few weeks ago — right up to her passing from a heart attack in the middle of November. She was proud of her association with the Society, where she was the power behind the 'refreshment services'; she was truly disappointed this year when Hounslow's Open Show date was moved, to avoid clashing with the September General Assembly meeting, she found herself on a pre-arranged trip to Bournemouth instead of taking care of the Judges' lunches. Such is the stuff real enthusiastic Society members are made of and all the members of Hounslow will be saddened by her loss.

Sadly Hounslow also has to announce the death of **Bill Johnson** on Thursday 21st November, a member who had recently moved to Blandford Forum, Dorset. Bill was not a flat hunter — but took great care in looking after his favourite specie — Discus fish. His main hobby was restoring old motor cycles, his last conquest being a Harley Davidson. Our deepest sympathy is extended to his wife & family.

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The image shows several containers of Aquarian fish food. In the foreground, there are three smaller blue tubs: one labeled 'aquarian GRANULES TROPICAL COMPOUND', one labeled 'aquarian TROPICAL GRANULES', and one labeled 'aquarian FLOATING PELLETS FOR GOLDFISH'. Behind them is a larger blue tub labeled 'aquarian FLOATING STICKS for LARGE TROPICAL FISH'. To the right, another large blue tub is partially visible, labeled 'aquarian FLOATING STICKS FOR LARGE TROPICAL FISH'. The background is a light-colored, textured surface.