

FISH WORLD

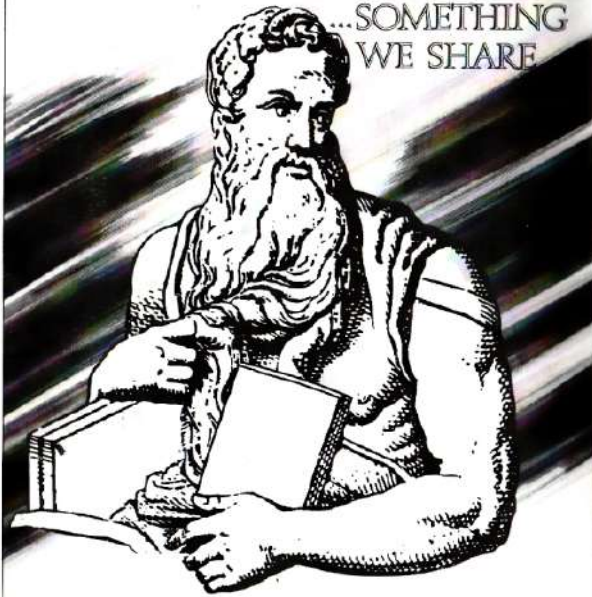
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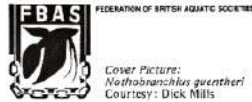
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SEPTEMBER 1991 - No: 2 Vol: 1

Material for the next issue of this magazine should be in by the 1st November 1991 and sent to: The Editor, Fishworld Magazine, 46 Airthrie Road, Goodmayes, Essex IG2 9QU.

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Editorial . . .

It's amazing how fast the time passes when you're involved in a new job such as this. For me it's hard to believe that the second issue has now been finalised, and preparation for the December issue is well under way — although new features will always be welcomed.

The FBAS Council Members have been extremely busy over the last few months participating in the 2nd Hampton Court Palace International Flower Show and preparing for The Supreme Weekend of Fishkeeping in Weston-super-Mare later this year. Behind the scenes activities have been hectic, but hopefully well worthwhile.

Now that this issue of the magazine has been "put to bed" I can now go on my holidays. I am going to Florida and first port of call, family permitting, will be "Sea World". I intend taking lots of photographs and perhaps will be able to put together an article on my visit in the next issue.

SYLVIA BROWN, *Editor*

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We All Have To Start Somewhere

by Jim Short

'B' Class Judge,
Corby Aquarists Society



I have been asked to pen some reminiscences of my piscine experiences, so where better to start than at the beginning . . .

The war in Korea was in its final stages when I received my papers to stand up and be counted and don the uniform. Not wanting my Mum to pine away worrying about me, I decided to buy her a pet. Dog? No! We already had Roy, a black curly-haired Retriever. Badgie? No, we already had Peter and Paul. Cat? Out of the question altogether. Then it dawned on me — not only a pet for Mum but it would also be a companion for Winston.

Winston was a Goldfish, of undetermined sex, age or religion. He was named after you-know-who and was not unlike his famous namesake, being of gargantuan proportions! He also had the run of a four foot angle-iron framed 'tank'. I say 'tank' because it looked like one and weighed like one.

Another Goldfish was the answer. So off I went to the local pet shop. But, despair, dismay and disappointment when I saw not a single Goldfish in sight. The proprietors of the store told me that the fun-fair was in town and the Fairground Manager had bought up his entire stock. How I cursed that F/G Manager would take too long to tell; the curse bestowed on the Jackdaw of Rhims was a blessing compared to my outpourings! The pet shop prop was visibly shaken but nevertheless did his level best to steer me in the direction of 'something more exotic'. "These, sir," he said, "are from a tropical clime —

they are called Guppies, these are Platys, and those are Swords." I was not impressed and knew right away that I was being conned. I knew nothing at all about fish but when he mentioned Swordfish that was it, even people who were not into fish knew that a Swordfish had a sword on the front of its face not something sticking out of its rear end (even if it was six inches long)!

I looked into some other tanks and my eyes fell upon a creature that was out of this world. It was the weirdest shaped fish ever seen and it was as black as the Ace of Spades. It seemed to struggle through the water — it came to the front glass and peered out with big queer-looking bulbous eyes — and I fell in love. "Can you tell me what that is?" I asked. The pet shop man said it was a Black Moor. I said I would have it and it was duly purchased — think it was 2s. 6d. (15p).

He was transported speedily home between my legs on a Triumph 500cc motorbike. My Mum (being educated in Scotland) was a fountain of knowledge and she knew right away what it was. She was also a very well-read woman, so much so that within minutes she said, "As he is a Moor we will call him Othello," and so he was named. I never argued with Mum, her word was law, but I could not figure out why we had to give him an Irish name. On our street there was an Irishman called O'Malley and round the corner there was another called O'Rourke, but I just could not relate to a black fish called O'thelo. However, soon I was off to serve King

and Country. Eventually I was released from service life and back home again. Winston and Othello soldiered on and on under their daily diet of six ants' eggs each.

It was around about the time when Presidents all over the world were dropping like flies. One very notable one - I think his name was Kennedy - got his in Texas. But the main topic of conversation in our family was the end of an era - Winston cashed in his chips! Winston, for all we knew, saw in (and out) the Jazz Era, the Rise of Bill Haley, Rock 'n Roll and the age of Elvis and Cliff. I remember I had to leave my wife and children to go up to my Mum's for his funeral. Mum wiped away a tear as I laid him to rest in his 'Secret Hole', a hideaway hole at the bottom of the garden under a lilac tree. Gently he was lowered in, swathed in cotton wool and encased in a stout wooden cigar box with gold writing on it, to nestle amongst other treasures like some pieces of multi-coloured stones which had been swapped for the odd American comic and six marbles. On top of the box was strewn pieces of glass so that any cat which thought that there was an easy meal to be had would get his comeuppance. Winston was gone.

However, Othello took it quite badly too and he pined for weeks and weeks - hardly ate an ant's egg a week according to Mum. About 5 weeks later, on a wet Sunday the kids and I paid a visit. On the wet footpath were dozens of worms; I had an idea that Othello might like something else to eat for a change so I picked up about six little red ones and dropped them into the tank. Othello moved through the water like a striking Barracuda and only two worms ever reached the gravel, numbers 1, 2, 3, 4 hardly got wet before Othello downed them! Nos. 5 and 6 were picked off later. Othello was still in mourning but his black suit took on a different shade of black; soon he was in fine fettle and Mum decided to throw out all the 'toys' that were Winston's in the tank and redecorate with new gravel and toys for

Othello. He prospered after that and every time it rained after that it was 'caviar' for dinner - he loved it and grew.

March 17th 1968 was a lousy day; it was icy-cold and windy. It was also St. Patrick's Day (he's welcome to it - trust an Irishman to pick a lousy day for a holiday!). Bad things always happen to me on St. Patrick's Day - had a kidney removed on one, got terribly burnt on another, had an impacted wisdom tooth removed (the agony lasted all through Lent - I felt like a fasting Catholic), but worse was to come on this particular occasion. Othello shuffled off this mortal coil and departed in the wake of all good fish that had gone before him. The news came on a postcard lying on the doormat that fateful day when I returned home from work. It simply said, "Othello passed away during the night. Dad will get rid of him."

"Not on your Nelly," I said to myself ('Dad' was not Dad as in father, but as in stepfather - and typical of a by-gone age, bombastic, pedantic, ignorant of any feelings, devoid of love and apparently possessing the equivalent of a Master's Degree in everything from Astrophysics to Zoology. I raced up to Mum's but, alas, too late. In answer to my question "Where's the body?", he said "In the garden, but you won't find a body as such because I cremated him in the fireplace. The ashes are in the dustbin." It was with a heavy heart that I lifted the bin lid and gently picked up a handful of ash. I took it down the garden path to the lilac tree and scattered it above the Secret Hole. "Cheerio," I said and went back home.



To be continued...

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BOOK REVIEWS

Reviewer: COLIN PANNELL
THE WORLD OF CATFISHES by Midori Kobayagawa, edited by Dr Warren E. Burgess, published by T.F.H. Publications. Priced: £19.95.

This is one of the latest books from T.F.H. and it is sure to be popular with catfish fanatics. It incorporates the latest binding which is guaranteed for 10 years. It is slightly larger than A5 size and contains 192 pages printed to T.F.H. excellent standards and it is in full colour. The first 112 pages is taken up with named colour pictures with approx. 6 to 8 pictures per page with the pictures catalogues into four areas - these being Africa, Australia, Eurasia, and South and North America. I will not dwell on the pictures early to say that they are all named as far as possible, showing a number of previously unidentified catfishes as well as showing some old favourites. Although it does not try to show all known catfishes, these can be found in "The Atlas of Freshwater and Marine Catfishes", it does show a large number of different species of catfish.

From page 113 onwards the book now becomes purely reading matter with a number of sketches and pictures pertaining to the text nearby. On pages 114 and 115 it lists all 31 families of catfish and the area from where they come with the number of genera and species they contain.

The book continues with a very good introduction into catfish and then goes on to explain how to look after them and how to try breeding them in captivity with sketches on possible tank layouts.

The part which explains the features of catfishes tended to be of a technical nature, but on the whole I found the book interesting and informative, although I would not recommend it for beginners, more for people wanting to specialise in identification, keeping and breeding of catfishes.

Reviewer: DICK MILLS
TROPICAL AQUARIUM FISH - COMPREHENSIVE EDITION by Dr Chris Andrews and Dr Ulrich Baensch, & **MARINE AQUARISTS MANUAL - COMPREHENSIVE EDITION** by Dr Paul V. Loiselle and Hans A. Baensch.

Two Tetra-published books look well worth getting but in fact are quite different in the reading. Both are collaborations between two eminent ichthyologists and each deals with its own subject quite satisfactorily.

Taking the 'freshwater' book first, it is a mix of the thoroughly scientific on the one hand and commonsense explanations on the other, something not all books manage to achieve successfully. There is also an interesting 'clash' of aquatic practices, for instance the addition of sub-gravel soil and leaf mould is recommended for good plant growth, (something that many authors and aquarists may not necessarily agree with).

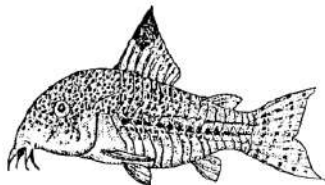
The book generally covers a 'community selection' of species with the occasional proviso; few 'wild' live-bearers are included (and one that is, *Dermogenys*, has the dubious honour of being pictured upside down!), but you can't please all readers all the time.

The marine book is also excellently presented except for some really annoying typographical errors in both captions and text alike. Whilst this may escape some readers' attention, one or two misplaced photos (or captions) won't, which is a pity.

The establishment of the aquarium environment comes first with plenty of good solid explanations. Compatibility of species is given more than adequate space as is their transportation and introduction to the aquarium.

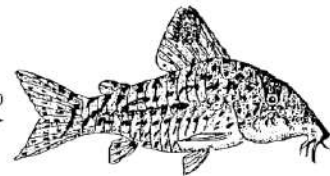
Obviously one cannot (and should not) realistically compare one book with the other as both are excellent in their separate ways - each excellent foundation books for any aquarist.

What's the difference?



Corydoras julii
 Size: 60mm
 Show Class: H

Corydoras leopardus (Myers)
 Size: 70mm
 Show Class: H



Although these fishes are sometimes confused, there are three main points of difference between them which should help you to identify them.

(1) With *Corydoras julii* the head is rounded, the black blotch on the dorsal fin extends from the lead edge to the trailing edge, which is in fact the top edge of the fin. Finally the heavy dark lateral line is bordered above and below by clear lines, these in turn are bordered

on their outer edges by faint dark lines.

(2) With *Corydoras leopardus* the head is pointed (shovel nosed), the black blotch in the dorsal fin is more central and does not touch the edges of the fin. The dark colouring of the lateral line begins approximately one-third back from the gill cover (operculum).

(3) Finally *C. leopardus* is a slightly larger fish than *C. julii*.

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THE LAMBS FIGHT BACK Or, bad & good news from the West!

DICK MILLS REPORTS

It appeared to have achieved something in my last report as Bulletin Editor according to some readers of the March Minutes. PORT TALBOT & DISTRICT A.S. took me to task for describing societies as 'lambs' waiting for instructions as to what to do over either applying for trophies, without the necessary forms. They suggested that undated forms without any specific year date, or engraving fee amount, could be produced in bulk for rapid and early distribution to societies. Point taken, P.T., but isn't it strange that after 20 years of pleading for contribution, news and views, I get a reaction from something in my very last report? Perhaps I should have started insulting societies sooner!

However, quickly following up that rebuke came news from the same source of another matter, also raised as part of the same Assembly.

Readers will remember the subject of membership of the O.F.I. being raised, with the Federation's advice to wait and see, particularly in the recent light that the proposed Draconian 'negative' or 'positive' lists of proposed fish importations (does it matter which?) may not come into effect after all. Port Talbot had written as suggested to their local MP and MEP and had received some encouraging replies. Herewith are slightly abridged versions of the relevant correspondence.

From Port Talbot & District A.S. to John Morris MP (Port Talbot) and Wayne David MEP (South Wales): 'We, the members of Port Talbot & District A.S., are concerned . . . over legislation which could be passed restricting the availability of tropical fish . . .

controlled by 'negative' and 'positive' lists of fish. In the Positive List only 30 freshwater species would be made available.

The source of this legislation is in Germany where conservationists are pressing the Government for the implementation of these lists and, if these laws are passed, will press to have these laws passed for the whole of the EEC. (Proposal at 33rd Environmental Conference, Weisbaden, 16th-17th November, 1989).

We are not only concerned for ourselves as hobbyists (who as a club are affiliated to the FBAS) but for the general public who may also keep fish without belonging to any society, thus making fishkeeping one of the most popular hobbies in Britain. If you could provide us with any information on this proposed legislation we would be most grateful.'

From John Gummer, Ministry of Agriculture, Fisheries & Food to John Morris MP for Port Talbot: 'Thank you for your letter enclosing the letter from Port Talbot & District A.S.'

As far as I am aware, there are, at present, no plans to introduce the sort of measures described in the TFH article either in Germany or elsewhere in Europe.

I understand that certain German conservation organisations are campaigning for restrictions on the number of species of birds, animals and tropical fish that may be kept in captivity, but that the German Government has no intention of adopting legislation along these lines. Changes to current EC legislation, controlling trade in endangered species, are under consideration by the

European Commission. It will consult formally on its proposal, in due course, but at present there are no indications that the Commission favours measures which would affect tropical fish in the way that Port Talbot & D.A.S. fears.

I am sending a copy of your letter and this reply to David Tripper at the Department of the Environment, in view of his responsibility for legislation concerning endangered species, and also to David Hunt at the Welsh Office.'

From Wayne David MEP for S.Wales: 'Thank you for your letter in which you express your concern about an editorial report in TFH.

I have written to the German Government and the European Commission on this issue, and when I have their replies I will contact you again.

Like you, and your members, I am against any moves which would restrict the availability of tropical fish to you and the general public.'

Many thanks to Port Talbot for keeping us up-to-date on developments (and for taking the initiative) from their 'consumer end' we now await responses from other areas, official or hobbyist. (Mental resolution to self: amend any reference to 'lambs' to read 'lions' in future!)

Meanwhile, also in response to the same 'conservation' issue and O.F.I. membership, comes the following from PLYMOUTH & DISTRICT A.S., whose letter has been slightly abridged, due to limitations of space, but their subsequent statement is reprinted in full.

'Our Committee has discussed the request that societies should contact local MPs or Europe-MPs, but feel that the issue is of such extreme importance to the hobby and societies that contact should be made at the highest level to request information on the possible restrictions of movement of live fishes in Europe. As elected representatives of the many societies within the Federation, we consider that the quest for

information should be initiated by you on behalf of member societies, in order to achieve a coherent and unified statement rather than fractured queries and unco-ordinated comment from fellow societies. Our Committee has formulated a statement which covers our opinions . . . and we suggest that this may be used as a platform for your letter to the Ministry of Agriculture, Fisheries and Food. This vitally important issue must be addressed in a co-ordinated manner by our governing body - the FBAS.

Although we understand . . . that in Germany the legislation to restrict fish importations has been dropped, we consider this action will not necessarily reflect the situation in Britain. The UK is often considered to be an exception with regards to livestock control, due to its physical isolation from mainland Europe. Our campaign against fish importation restrictions should continue until we have received written assurances from the Ministry of Agriculture, Fisheries and Food. Our statement is as follows:

POSSIBLE RESTRICTIONS ON THE MOVEMENT OF LIVE FISHES IN EUROPE: We understand that the lifting of trade barriers within the European community in 1992 might necessitate legislation to restrict the movements of certain species of live fish.

Speculations that such restriction, if implemented, will include ornamental species such as Goldfish and Tropicals has caused much concern to hobbyists, like ourselves, and traders.

We are informed that in Germany, for example, only some thirty to forty species will be permitted for importation. This represents less than 10% of the species currently available to German aquarists.

Given that 1992 is only a few months away, we are concerned that Government information on any proposed restrictions has remained negligible to the extent that we are unable to distinguish between fact and rumour. A few private discussions have taken place between a self-appointed body, named

'Ornamental Fish Industry - UK', and the Ministry of Agriculture, Fisheries and Food, however the outcome of such negotiations has not been generally publicised.

We wish to emphasise the size of the ornamental fish industry which was independently assessed at £110million in retail sales for the UK in 1987, and which has shown considerable growth since. In the UK alone, there are an established 3 million aquarists who seek pleasure in keeping a wide variety of fish species.

The hobby provides a significant source of overseas income to Third World Countries in Africa, South America and Far Eastern Asia, giving employment to local people in areas such as rural Peru where alternative sources of sustainable income are extremely limited.

The hobby is now recognised as playing an important part in the captive breeding of endangered fishes, including species which are extinct in the wild. Legislation to prevent the importation

of a wide variety of species will result in the inability to maintain and extend captive stocks and would undoubtedly contribute to further extinctions.

We are fully aware of the need to prevent the spread of disease between imported and native fish stocks and understand this is the major reason for considering import restrictions. However, we wish to point out that only certain ornamental coldwater species, notably cyprinids, have been implicated in the transmission of disease to our native fish fauna; the vast majority of exotic species imported are tropical and cannot survive in temperate waters.

We would request consultations on any plans to restrict the importation of live fishes into the UK.

As these contributions have appeared in the new 'FISHWORLD MAGAZINE' to which I am but a mere contributor, all future statements on this subject should be addressed to the Editor, Sylvia Brown whose address appears on page 1.



Just received in - some good news. Herewith is a copy of a letter to David Wayne from Bernd Oetter, Consul General at the German Embassy in London. Editor

'With reference to my letter of 3 April 1991, I should like to let you know that there are no plans of the German Diet to restrict the availability of tropical fish.

The Federal Minister for the Environment has pointed out that there are no plans to introduce positive lists to the law on the protection of species. Such a procedure would not be compatible with the Germany federal law on the protection of nature which entitles the

government only to draw up negative lists of endangered species the sale of which might be prohibited.

A change of the existing law on nature conservation would also infringe the rules of the European Community. The EC Commission is about to introduce a new statutory order dealing with the import and export of wild animals and flowers which also is based on the principle of the negative list.'

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The 'Aquarian' Advisory Service supports the fishkeeping hobby in many ways with lectures at exhibitions and of course with its renowned free advisory service. If you have any questions on any aspects of fishkeeping, write to: The 'Aquarian' Advisory Service, P.O. Box 67, Elland, West Yorkshire, HX5 0SJ.

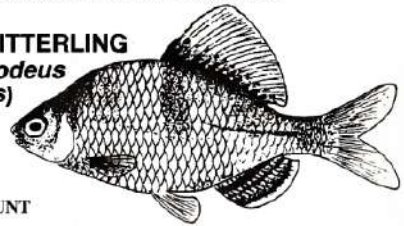
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From Russia With Love!

RUSSIAN BITTERLING (*Acanthorhodeus micropterus*)



By VERNON HUNT

This rather large species of bitterling has been in this country for approximately 12 months to my knowledge and since its arrival it has featured in many open shows; indeed the species has frequently occupied first and second positions in the A.O.S. Coldwater Class. This is in effect a nonsense because it has not been positively identified. One source quoted the scientific name as *Acanthorhodeus micropterus*. I checked with the Natural History Museum and the person of authority there informed me that the specific name "micropterus" was unlikely. I, for one, considered that the pectoral fins were not particularly small, as was obviously the understanding at the Museum. It is, however, the only scientific name we have for the moment.

It is a large fish; of this there is no doubt. No one yet knows how big the actual species gets so how can it be judged for size. It is apparently a fish indigenous to the Amur Valley region of eastern Siberia, also northern China and Manchuria. The nearest large city associated with this species is Vladivostok.

The characteristics of the species are as follows: Body as illustrated. Head-length ratio 4.86; body-height ratio 2.27; fin ray counts — dorsal 13 rays, anal 11-12 rays. Lateral line scale count 35. Dorsal fin high when fully extended. Colour — male in breeding condition body immediately behind gill cover,

flanks to forward belly, rosy red to pale claret. Caudal peduncle through into tail, brilliant crimson. Rest of body siliceous. Pectoral and pelvic fins clear of any pigmentation; dorsal fin has shade of carmine red, anal fin barred black, grey, black, grey, black with vivid white in trailing edge. Elsewhere in the body there is the usual curved greenish-blue line beginning in the caudal peduncle and terminating roughly in line with the anal vent. The "follow star" markings (tubercles) occur on upper head, above and forward of the eye. There is a distinct, slightly under the surface, blotch which occurs immediately below the leading rays of the dorsal fins and extends roughly to half the body depth. This particular mark does not seemingly occur in any other species of bitterling.

There are no details for the female; the trading fraternity, in their usual infinite wisdom, sell only the pretty ones — unless of course sexes are alike but I don't consider this likely. The facts about breeding are therefore unknown to myself.

This species will withstand very low temperatures. It has to be wintered properly and not kept at living room temperatures all the year round. The "rest period" is essential for coldwater species; the colours are enhanced the following spring along with the breeding potential.

THE SECOND Hampton Court Palace International Flower Show 1991

INCORPORATING
(July 11th-14th)

THE BRITISH ROSE FESTIVAL



Faced with the prospect of entertaining around 200,000 visitors over the period of the Show, as well as filling their 30ft x 12ft marquee with suitable attractions, the FBAS team exhibiting at the Flower Show knew that they were in for a busy time. Additionally, with the majority of visitors being far more 'garden-minded' than 'fishkeeping-minded' a rethink was necessary beyond the normal Open Show Stand type of exhibit.

Despite well-laid plans at the outset, as the Show date grew closer Chairman, Joe Nethersell, and PRO, Dick Mills, had begun to think that the task was beyond them: Vice-Chairman, Colin Richards, had to cancel his personal appearance and practical expertise at

the last minute and extra (or even replacement) support looked unlikely. Aquarian's usually willing David Ford was to be engaged abroad in Spain on company business and Sparsholt College were busy arranging one of their own courses for that very weekend (although they did send along very welcome publicity material, as did David). Fortunately, Alan Benson came along to talk about pond-filtration systems, and David Pool of Tetra was another visiting quest to talk about pond fish care. Thanks to Interpet's support with booms and pond-care products (especially their recent Chelsea Flower Show launched Pond Balance treatment for Blanketweed) and to a large furnished coldwater cabinet aquarium, a tropical furnished

tank (tanks by courtesy of Seabray) and an aquascape, the marquee soon took on a busy and informative look.

We then added the public launch of our FISHWORLD MAGAZINE, information about Weston-super-Mare, and, as a completely new feature, a practical demonstration on how to install a liner pond. No, not by repeatedly digging up Henry IV's favourite lawns, but on a table top, using greengrocer's green cloth 'lawn', a sand-filled box, a miniature conifer, a dustbin liner and a fair amount of humour. The latter was very necessary as the two demonstrators, Dick Mills and Peter Caira (from Hounslow A.S.) came in for a constant amount of heckling from other exhibitors. On the extra-busy weekend days, the team was further supplemented by President Bob Esson and General Secretary Adrian Dempsey dealing with goldfish and society/location queries respectively.

Of course, the main question asked revolved around green water and blanketweed; these were dealt with by

constructive answers from all concerned, aided and abetted by Peter Furze who turned into a ready-made Interpet salesman at the drop of a hat — except for when the aromatic fumes from the nearby coast steak sandwich stall proved too overwhelmingly tempting! The most unusual question of the whole show period was how to stop a fox eating water-lily buds.

The 'Aquatic Village' area of the Show was arranged appropriately enough along Hampton Court Palace's Long Water with ten aquatic displays, although the backing row of gardens also featured pools in their designs. The top award for excellence went to Anglo-Aquarium, with Kent Koi and Aquarist & Pond-keeper Magazine sharing second place. Master-minded by G. J. Skilton, Aquarist, the Aquatic Village was a whole aquatic microcosm and, probably like Topsy, will just grow and grow in years to come. We look forward to 1992 with eager anticipation.



The 'Aquatic Village' — FBAS marquee on the far right.

PLANTS

One of the most common problems received is that aquarium plants will not grow and eventually die. The secret of keeping aquatic plants is quite simple however - good roots. In the wild the roots are deep in still mud, but in the aquarium hobbyists expect the plants to thrive in gravel, possibly with lead weights attached, and with water flowing through the roots from an under-gravel filter.

ROOTS: Only buy plants with good bushy roots, even if the plant has super green leaves, it will not survive if the roots are poor or absent. It doesn't even matter if the leaves are small with perhaps some yellow ones, just trim them off with scissors and new ones will sprout providing the roots are there to feed the plant.

ROOTING MEDIUM: You would not expect garden plants to grow in the gravel path, so why expect aquatic plants to survive in aquarium gravel? The roots must be deep in soil or at least protected with material such as rockwool so they are not damaged when transplanting. Prepotted plants are available or you can pot your own using small seed pots filled with loam, topped with gravel to prevent the soil fouling the water. River sand is far better than gravel for the planted aquarium, deep enough to cover the prepotted plants. The so-called Dutch Aquarium, which is a dense collection of plants with few

fish, has a layer of loam and bulb fibre topped with a 50/50 mixture of sand and gravel to hold the soil in place.

LIGHTING: Green plants use photosynthesis to grow, which requires a certain level of light intensity per area of leaf. Hence the same light levels are needed whether the aquarium has few or many plants. However, if the plants are too few, the surplus light encourages algae, which can choke and kill the plants. Fluorescent tubes are a popular light because their running costs are low and they are cooler than a bulb. North or White Light fluorescents are available but for plant growth modified tubes are available such as Gro-lux, Sun-glo, and Aqu-glo. Even these lights benefit from addition of a tungsten bulb, just 40W. It is as if the plants need a 'hot' light (like the Sun) rather than the cold 'chemical' lights of fluorescents. Remember also that fluorescent tubes fade with age, after a year the lights may still appear to be working well but the light intensity will have fallen considerably and new tubes (or additional ones) are needed. An excellent choice, especially for Dutch Aquariums, is the new Actinic and Mercury-halide spot lights, but they are expensive.

The following are the minimum light levels, add an extra tube or bulb as growth rates show are necessary (fast spindly growth with pale green leaves means the light levels are too low).

Length of Tank	Tungsten Bulbs	Fluorescent Lights
18 inch (45cm)	1 x 40W	1 x 8W (12 inch)
24 inch (60cm)	2 x 40W	2 x 15W (18 inch)
30 inch (76cm)	3 x 60W	2 x 20W (24 inch)
36 inch (90cm)	3 x 40W	2 x 20W (24 inch)
48 inch (122cm)	4 x 60W	3 x 30W (36 inch)

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aquarian ADVISORY SERVICE

My Koi and their Water

- Part Two

by M. R. Emerton

Reprinted by kind permission of The British Koi Keepers Society
"Northants Section News"

Following the last article by Mr Emerton on water temperature affecting your koi, he now continues his advice on water temperature and quality.

To allow koi to acclimatise to differing water temperatures without causing stress through thermal shock, you can help your koi by providing them with suitable ponds containing a good body of water to resist rapid temperature changes and reasonable depths to shelter from rapidly changing air temperatures. We can also aid their abilities by feeding correctly and adjusting the food offered to suit the conditions.

In general, the koi's ability to digest and metabolise the food eaten is directly related to the surrounding temperature. The warmer the water is the faster they can digest the food and the colder it is the slower their ability becomes.

Animal protein being the most difficult to digest at low temperatures, change to wheatgerm foods at about 50°F and below. At 40°F it is advisable to cease offering pelleted food as the fish is in a near state of hibernation and any undigested food in its gut will rot and cause gut inflammation and lead to near certain death in many cases. There is always enough highly digestible natural matter in an established pond to sustain the koi through the winter.

Heating your pond through the winter obviously has its benefits in terms of growth, but the thought of heater failure in the midst of winter with a pond of koi with a belly full of pellets is not my idea of fun and anyone that does heat and feed through the winter must be sure that any breakdown

can be remedied pretty quickly if their koi are not to suffer.

WATER QUALITY

When we talk about water quality we are describing the standard and properties of the water we keep our koi in. Water is a very complex fluid that contains solids, gases and solutes in very measurable amounts. It is known amongst the koi keeping world that some people get very concerned almost to the state of obsession with certain characteristics of the water quality cycle. No one has as far as I know proved that this is a good or bad practice. You often hear of many ways of determining good water quality. To quote from some koi keepers: "I never test the water, I just watch the fish and they tell me if things are OK." I suppose that theory's fine if you can afford to replace a pond full of koi that have just keeled over in protest to the poor water quality.

"I test my water every day for everything and it's always spot on. It costs me an arm and a leg but I believe my two goldfish are happier for it." Bit of overkill here and probably no better than the first chap's advice.

So what should we test for and how often?

Well there's not a straight answer for that and I haven't the time or space on my computer to answer it as often it is a personal choice and can vary with conditions, systems and the time of the year. However, I can tell you what sort of things are worth monitoring.



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(1) AMMONIA & NITRITE

These are toxins either directly introduced into the water by the koi or as a result of bacterial action in the filters. They are both highly toxic to koi and should be kept to a specific minimum (some people say nil).

Test kits for these are widely available from most aquatic outlets.

(2) pH

This is an indication of the acidity/alkalinity of the pond and can also be an indicator as to detrimental build-up of acidifying sludge/waste etc. or invasion of pollutants, chemicals, etc.

(3) GH/KH

This is a measure of the water hardness often ignored by many people but has a direct correlation with the ability of the water to buffer changes in pH

and can directly affect the health of your koi.

(4) TEMPERATURE

Easily measured but crucial in determining feeding regimes and need for additional aeration requirements in warm weather.

(5) CLARITY

Can be measured visually and can give information as to the general condition of the pond but crystal clear water is no guarantee of good water (i.e. look at your tap water - would you put a fish in that?).

This is not a definitive list, but a short guide. The main tests you do will come with experience and knowledge of your own system and what you believe as an individual koi keeper.

The Eel Strikes Back!

By DICK MILLS

The 3rd INTERPET BRITISH OPEN CHAMPIONSHIP was held on Sunday, 19th May, at Corby & District A.S. Open Show. Following last year's ding-dong battles, both at the previous 'Open' and at the FBAS Supreme Championship in November, many eyes were on the fishes that would be having a 'return match' one way or another, all striving to win fishkeeping's largest trophy.

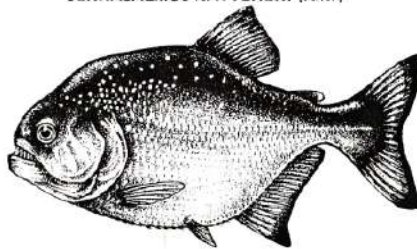
And so it turned out to be: amongst the entries were the 'Little and Large' of the aquarium world - the diminutive *Botia siatimunki* (1990 FBAS Supreme Champion) and the *Anguilla anguilla* (1990 Interpet British Open Champion). After a well-fought battle, the referee, FBAS Judge Colin Pannell, came up with the narrowest of winning margins in the Eel's favour. The full results are as follows:

1st & 1991 Interpet British Open Champion - *Anguilla anguilla* (88 pts) Robin Day & Marion Wright, Select A.S.
2nd - *Botia siatimunki* (87 pts) Andy Feast, Mid-Sussex A.S.
3rd - *Mogurda mogurda* (85 pts) Alan Finnegan
4th - *Archocentrus spilurus* (84 pts) Roy Chapman
5th - *Melanotaenia berbertaxelrodi* (83 pts) Paul Yeomans
6th - *Botia dario* (82 pts) Andy Feast
Interpet Ltd are to be thanked for their continuing support for the British Open Championship, Corby & District for their hospitality in staging the event, as are the entrants who brought along their would-be champion fish to take part. We look forward to the next encounter later this year at the Federation's Supreme Weekend of Fishkeeping at Weston-super-Mare, 8-10/11/91.

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Fishworld Fishguide

SERRASALMUS NATTERERI (Kner)



Reproduced from *Freshwater Fishes of the World* by Günther Sterbis
It is hoped to have a tank of Piranha on show at the 'Supreme Weekend of Fishkeeping' in Weston-super-Mare, 8th, 9th and 10th November 1991

Popular Name:	Red-Bellied Piranha or Red Piranha.
Habitat:	The Amazon and Orinoco Basins.
Genus:	Characidae
Characteristics:	Body and finnage shape as illustrated. Basic body colour varies from pale brown to greyish-olive, shading to blue-grey towards the dorsal contour. The throat and belly covered with many small metallic spots. Dorsal greyish with a dark area at the base and outer area of the fin. Caudal dark grey base and outer third very dark grey to black. Anal, pelvic and pectoral fins red. The anal with a broad dark grey to black margin. Adipose with a narrow black margin.
Size:	30cm in the wild, but remains considerably smaller in captivity.
Remarks:	Previously known as <i>Rossoseltiella nattereri</i> , <i>Serrasalmus nattereri</i> is somewhat variable in both colour and shape, especially the shape of the head and the depth of the body.
Show Class:	C

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Judges & Speakers Corner

AT THE SUPREME FESTIVAL OF FISHKEEPING at Weston-super-Mare on Sunday, 10th November, we intend to hold a judges' conference. It will probably be at 1.30 or 2.00 p.m. and will last a maximum of 2 hours.

One of the items on the agenda will be the subject of cultivated livebearers and standard fishes generally with regard to the difficulties being experienced at the present time.

The Judges & Standards Committee hope that as many FBAS judges as possible will attend the meeting to relate their problems and contribute to the discussions.

If you have an item for the agenda please drop a line to the Judges & Standards Secretary (and Editor of Fishworld Magazine) as soon as possible; Mrs Sylvia Brown, 46 Airthric Road, Goodmayes, Ilford, Essex IG3 9QU. Peter Cottle, Chairman J&S Committee

Guppies Galore!



VIVIPAROUS (LIVEBEARER INFORMATION SERVICE) announce that the Viviparous International Guppy Show will be held at the Supreme Festival of Fishkeeping at Weston-super-Mare from Friday, 8th November until Sunday, 10th November, 1991.

Please note that all entries will be restricted to Viviparous Members and overseas personnel only.

Judging will be to IHS Standards and further information and/or entry forms can be obtained from: Graham Scaddon, Fancy Guppy Section Manager, Viviparous (LIS), 119 Victoria Road, St. Budeaux, Plymouth, Devon, PL5 1RY.

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WHY A GARDEN POND?

By HARRY HOOPER
Mill Lane Nursery & Water Garden

For generations human beings have been captivated by water. Throughout history man has created elaborate water features mainly for the sheer beauty that moving or static water can provide. Some Japanese gardens are a perfect example of aquascaping. Even small boys armed with a fishing net and jam jar rummaging around in the local pond searching for frogs, newts and tadpoles find water fascinating. The naturalist besotted by the wealth of unusual creatures dwelling beneath the water or observing the wild life attracted to the pond and surrounding wetlands. Botanists can find an abundance of aquatic plants to study either varieties suited to growing permanently submerged or plants that are more at home at the water's edge, plus the surrounding boggy areas can provide many varieties of moisture-loving plants.

Nature has provided us with some breathtaking water features, vast rivers, lakes, waterfalls, even down to the small natural pond. These small ponds are of great importance to our indigenous plants and wildlife.

Unfortunately as we are all aware with today's technology creating high pollution levels within our waterways and modern farming methods our natural ponds are diminishing at an alarming rate. But fortunately with the growing interest in water gardening many species of wildlife are acclimatising themselves to the modern garden environment. Ponds are of great value and importance to numerous species of insects who lay their eggs in or near water as the larval stage of life for many species is under water. In early spring the

amphibians start to arrive to take up residence in the pond as water is necessary for the reproduction of newts, frogs and toads. Frogs and newts will occupy the pond for longer periods than toads as toads will leave the water soon after spawning. Frogs and toads relish the thought of a slug as a meal - this is also helping the gardener on the vegetable plot.

If you decide to establish a water feature within your garden, in many respects the first steps to take are undoubtedly the most important when it comes to planning the design and location. Consideration should be given beforehand to ensure that the existing landscaping will blend with the proposed aquascaping when forming the water garden. The focal point is essential as all members of the family will want to enjoy every aspect of the water garden, just the sound of moving water or to watch the abundance of wildlife that will visit or inhabit the environment you have created. The water garden should be positioned to allow as much sunlight as possible as a sunny site is essential from early spring and throughout the summer months to encourage the aquatic plants to flourish to their best advantage.

The pond should be as far away as possible from trees as falling leaves during the autumn will sink to the pond's depths and decay. If the pond is on the small side the gases created by decaying vegetation at the bottom of the pond can be fatal to fish if the pond freezes over during the winter months. Therefore it is advisable to use a fine mesh net to catch falling leaves before winter arrives and also to remove the

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foliage of plants surrounding the pond that have died back for the dormant period.

When spring arrives the water temperature starts to rise and the fish dwelling in the pond will come into breeding condition. After spawning every member in the family will relish the sight of young fry just noticeable swimming among the plant life at the water's edge.

If you intend to form a waterfall or position a fountain or include a filtration system in your water garden, remember electricity will be necessary to operate a pump to circulate the water. A waterfall or fountain will be beneficial to the fish during the hot summer months adding oxygen to the water. It is advisable for safety reasons to consult a qualified electrician for information regarding circuit breakers, etc.

The design of the water garden should allow for easy maintenance as a water garden needs as much attention as any other part of the garden. You must appreciate a pond is not just a hole filled with water. With the average size of the suburban gardens today, extensive water features are obviously out of the question. But fortunately with modern methods of pond construction a moderate water garden can be achieved quite easily and without too much expense. Before you commence digging the pond, it would be to your advantage to visit a reputable water garden centre to examine the wide range of materials available for pond construction.

The most important points to consider when deciding on the size of the pond you intend to install is the larger the pond the better; this will assist the natural biological balance to function properly when the pond eventually becomes established. The larger the pool the less the temperature will fluctuate. A steady temperature is essential for the pond's inhabitants. Also remember to be generous with the depth of the pond as this is an important factor for the safety of the fish during the winter months. A minimum of 18 inches

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deep should be allowed when excavating the pond.

Nowadays there are available an extensive range of preformed pools manufactured from fibreglass or moulded plastics obtainable in various shapes and sizes. This type of pond is ideal for the instant water garden but not very practical unless a larger version is used. The most popular material used for installing water gardens is undoubtedly a flexible liner. The use of butyl or PVC liners enables you to create your own design of pond, but remember to keep the design as simple as possible when creating an informal pool because this type of pool should look as natural as possible.

When the water garden construction has been completed the time has come for planting the aquatic and moisture-loving plants. Most good water garden centres offer a comprehensive range of aquatic plants from the waterlily, marginal plants such as flowering rushes, true water iris, various reeds and different forms of marsh marigold to deeper water aquatic plant varieties such as *Oenothera aquaticum*, Water Hawthorn and oxygenating plants that all play a major role in keeping the balance of the water garden.

It is very important that you are patient before releasing any fish into the pond. The pond must be fully planted and allowed to settle prior to the introduction of fish. At least three weeks should elapse before adding any fish to the pond and remember not to overstock until the plant life has become established. You must also remember that fish are swimming in their own sewerage, but established plants will feed on the nitrates created by fish faeces. This is termed by pond owners as a properly balanced pond.

There is a good selection of ornamental fish species suitable for garden ponds nowadays. The common goldfish and comets are always extremely popular with pond owners. The beautiful Shubunkin can offer a wide range of colours, especially the outstanding

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DAILY MAIL, Thursday, 6 June 1991

TV hit for a fish called Lisa

A VIDEO of tropical fish swimming round their tank is proving a surprise hit.

It has been described as '80 minutes of fish doing very little and 10 minutes of sea anemones doing even less.'

But after two weeks on sale in Woolworths the Video Fish Tank has sold more than 4,000 copies at £10.99 each to top

the store's 'special interest' chart.

A fish called Lisa is the star of the show. The Amazonian Arowana is one of 50 or so fish which appear in the video, by documentary-maker J. Edward Miller.

'They're so very relaxing,' he said yesterday. 'They induce a feeling of well-being in the viewer.'

(Continued from Page 22)

Bristol Shubunkin, Tench, Bitterling and Rudd are equally good pondfish but not as colourful as the domestic breeds. Golden Orfe make excellent pond fish as they are surface feeders and best kept in a small shoal of five or six. Orfe enjoy moving water but if at any time medication has to be administered to the pond make absolutely sure that it is harmless to Orfe.

Koi Carp are extremely popular with fish keepers but require a large pond as they grow considerably larger than normal goldfish and will eventually become destructive to plant life. For this reason dedicated Koi keepers construct specially designed ponds omitting any plant life but install elaborate biological filter systems to deal with the water quality.

Fancy Goldfish varieties such as Orandas, Veiltails, Lionheads, Moors, etc., although absolutely enchanting to watch should be avoided for use as pond fish unless you are prepared to provide indoor aquaria to accommodate this type of fish during the winter months as a severe winter may well prove fatal.

Always remember the golden rules of water gardening. Do not become disheartened if a newly constructed

pond becomes green with algae. This is caused by sunlight but will not harm the fish in any way whatsoever. Do refrain from emptying the pond to start again because as the waterlilies and other aquatic plants start to grow and become established, the algae will start to decrease naturally. Always purchase your fish from a reputable source to ensure you have obtained healthy stock free from parasites or diseases.

Never over-feed your fish — only feed as much as will be eaten in a few minutes as uneaten food will pollute the water. However tempting, never feed your fish during the winter months as fish will survive quite happily on their body fats built-up over the summer period.

During the summer months, due to evaporation, you may find it necessary to top up the water levels in your pond. If using tap water, make absolutely sure you remove the chlorine and other substances harmful to fish with the use of a water conditioner easily obtainable from any water garden centre.

Last, but not least, if you have young children make certain your water garden is child safe just as you would a swimming pool.

Happy water gardening!

UNEXPECTED BABIES!

By DR DAVID FORD
Aquarian Advisory Service

If you have just one aquarium and a collection of community tropicals, it is unlikely that the fish will breed and lay eggs. Egg layers have to go through ritual spawning and this is difficult in the crowded show tank.

With Livebearers however, the situation is very different. Female Guppies, Platies, Mollics, Swordtails and many Goodeids are almost certain to be gravid (pregnant) when you buy the fish.

The liveborn fish are produced at 4 to 6 week intervals all from the first mating, but the fry may not be seen by the hobbyist. It is an underwater jungle and the fry are eaten as soon as they appear. Angel fish particularly can recognise when a Guppy is about to drop her young and will follow her closely awaiting what is, for the Angel, a tasty meal.

If the tank is well planted, especially floating plants, the odd Livebearer fry may escape to live another day and if the other predatory fish are young and small the fry may even survive to maturity.

It is a dramatic experience for any hobbyist to see fish being born, but a traumatic one to see them being immediately eaten! So if you do not have a fish house or even a breeding tank, what can be done to save the fry?

You will need a small plastic tank (30cm or more) or even an old Goldfish bowl (a spare kitchen bowl can be pressed into temporary service). This should be filled with water from the main aquarium and the fry caught and transferred to the new tank. A fry net (a soft, fine mesh) is best but a jam jar can be used. Patience is needed to catch the fry, which can move at incredible speed. A glass jar is needed because you

will never persuade them to enter an opaque container such as a cup or jug.

Place the fry tank in a warm spot such as the kitchen or near a radiator and as soon as possible buy a heater-thermostat. You should have a spare anyway! Add the heater and set to give a warm 80°F (27°C) for maximum growth. No other equipment is needed, no filters, no gravel, no aeration. A plastic plant may be added to give the fry a sense of security.

Take one flake of fish food (if 'Aquaria' is used, the brown flake is the best choice) and crumble to a coarse powder and sprinkle on the surface. Practically all aquarium Livebearers are surface feeders. Repeat thrice a day for a week and then twice a day thereafter.

Once every day take two metres or so of airline tubing (any aquarium shop will sell it in any length) and siphon out about a ¼ of the water. The tubing is easy to start siphoning by just sucking on the other end (but not long enough to get a mouthful... remember fish swim in their own lool). Dangle the end into a bucket or bowl and use the inserted end to 'hoover' up the spare flake food that has sunk to the bottom (easily seen with no gravel). Avoid sucking up the fry, but by using a bowl any 'take that the journey can be returned to the tank... usually none the worse.

Top up the ¼ water with ordinary tap water, combine hot and cold to give the same temperature feel to a finger placed in the bowl and tank. With ¼ dilution there is no problem with chlorine in the cold water or copper in the hot water system. The fry are much more susceptible to ammonia and nitrite damage so daily dilution is the ideal. Siphon out all the surplus flake and any faeces to leave the water always

sparkling clear.

It may take three months for the fry to grow large enough to risk returning them to their first home. Always keep their bellies looking swollen and dark with food for maximum growth, but religiously remove any sunken flake after 12 hours and certainly within 24 hours.

Growth foods with a higher protein content are available and can be obtained when convenient, so too can the special fry foods. Livebearers do not need live foods for growth if a good quality flake is used. Live food such as

Brine Shrimp and cultured worms are used for conditioning for spawning.

Remember that any fry raised to maturity will be one family. That means if they breed another generation they will be brother x sister and so give poor genetic stock. Fry will be smaller and runts a higher percentage. It is best to let Nature take its course with such fish in the community tank. If you really want to breed the fish then get a proper breeding set up with several tanks and spawning pedigree pairs.

Meanwhile, the Goldfish bowl will do in any emergency...

Nice work if you can get it . . .



The Chairman told me that he was too busy to write an article for this issue and I believed him until I received a couple of photographs shown above. Busy with what, you may ask?

Left: The Chairman presenting Mrs Margaret Henderson with a Blue Badge for the assistance she gives her husband (Alan) in the work involved as Trophy/Brooch Officer and handling the Hagen Club Support Scheme. Margaret looks a bit dubious of where Joe is pinning the badge, but he certainly seems to enjoy his work!

Right: Joe Nethersell presenting the Interpet British Open Championship Trophy to Miss M. Wright of Select A.S. (see report page 18). But why is he holding her hand?

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F.B.A.S. ORGANISATION CONTACT POINTS:



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TRADEWINDS

By DICK MILLS

Extremely detailed research caused INTERPET to maintain the protein level of their **KOI SEASONS SUMMER FOOD** at 33% (rather than the expected 38%) because the higher figure related to the much warmer Israeli water where ammonia waste is less of a problem due to the increased area of the growing ponds. At our temperatures, optimised summer growth occurs without the filter being over-stretched with excess ammonia waste at the lower level. Again, to cope with the fish's natural increased intake of vegetable matter in summer, the vegetable protein content has been increased. Vitamins, minerals and natural colour enhancers are all present at the correct levels to ensure your Koi's continuing good health right through summer. Available in 1, 3 and 6 litre sizes, Koi Seasons Summer Food should be fed throughout June, July and August.

In newly set-up ponds beneficial bacteria may take from between 3 and 5 months to become established (with your fish becoming increasingly ammonia-stressed in the meantime). **POND TRIZYME** contains bacteria and biological activators which begin waste product breakdown processes immediately they are introduced into the pond system. Trizyme prevents the build-up of sludge, so delaying filter cleanings, and can be used to re-establish bacterial colonies after medication may have reduced their effectiveness. When transporting fish to shows, Trizyme will help in keeping fish free from stress, as it uses oxygen bound up in any waste products, rather than utilise dissolved oxygen in the limited volumes of water of the carrying vessel. For best results, Trizyme should be used every two weeks; it is harmless to plants and fish (even if eaten).

SHOW DATES

- 1st September**
Bracknell A.S., FBAS
Darlington A.S., FBAS (Ag)
- 7th September**
Bristol T.F.S., FBAS (O)
- 8th September**
Cramlington A.S., FBAS (Dc)
Evesham A.S., FBAS (T)
Walthamstow A.S., FBAS (Xb-m)
- 14th September**
Hounslow A.S., FBAS (S)
- 15th September**
Cardiff S.F.K., FBAS (Ea)
Nottingham, YAAS
Salisbury A.S., FBAS (Q) — Plus:
Bring & Buy Fish Auction
- 22nd September**
Northampton A.S., FBAS (K)
- 28th September**
East London A.P.A., FBAS (Ag)
Plymouth A.S., FBAS (Ma)
- 29th September**
Darwen A.S., FNAS
Mid Sussex A.S., FBAS (E)
- 5th October**
Goldfish Society of Great Britain,
Convention
- 13th October**
Blyth A.S., FBAS (M)
- 20th October**
Peterborough A.S., FBAS (S)
- 26th/27th October**
FNAS Festival
- 27th October**
Fair City, USA
West Cornwall A.S., FBAS (R)
- 8th/11th November**
Supreme Weekend of Fishkeeping
FBAS, Pontins' Holiday Centres,
Weston-super-Mare.

* Letters in brackets indicate FBAS Championship Trophy class allocation. Please note that the issue of trophies is subject to confirmation by FBAS Trophy Officer & FBAS Treasurer.

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