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Comments and Quotes

- Fish appetites and water temperature
- Breeding and old water
- Mooning around

Temperature
and Feeding

THERE'S nothing new in the general statement that the appetites of fishes are very much geared to water temperature, so that, for cold-water fishes, cooling of the water in autumn and winter is accompanied by decrease or cessation of feeding. It is also generally assumed that such reduced feeding is the result of slowed digestion by fish at low temperatures. Not many aquarists could give chapter and verse for proof of these matters, however, and it was interesting to see some figures on the rates of digestion at various temperatures that have been determined by biologists for a particular fish, the North American channel catfish (*Ictalurus punctatus*) and published in THE PROGRESSIVE FISH CULTURIST (U.S.A.).

The channel catfish is a species produced commercially in U.S.A. fish farms, so that the information about temperature effects on feeding measured by Mr J. B. Shrable, Dr O. W. Tsemeler and Dr C. W. Deyoe of Kansas State University has an obvious practical application. The range of temperatures at which digestion tests were carried out was 50-85°F (10-29.4°C). Most rapid rate of digestion was by fish in water at the higher temperatures (80-85°F; 26.6-29.4°C), although not a lot faster than at 70°F (21.1°C), and rates slowed to the minimum at 50°F (10°C). Whereas only small amounts of food remained in the stomachs of the fish kept at the higher temperatures for 24 hours after feeding, stomachs of fish fed and kept at 50-60°F (10-15.5°C) still contained significant amounts of

food 24 hours later. The biologists remark that the results are affected by factors such as the nature of the food consumed and the conditions under which the fish are kept as well as varying with species of fish considered.

Water
Conditions Stop
Breeding

IT has been suggested that when fish have been kept in water that has been unchanged for some time substances produced by the fish accumulate in the water and have the effect of stopping spawning. It is certainly not unknown for aquarium fish to begin spawning shortly after transfer to fresh water, and indeed this is a manoeuvre often recommended for breeders trying to induce spawning by a recalcitrant pair. Whether this 'repressive factor' is a specialised product of the fish, rather like a hormone with anti-reproduction action, or whether it is merely accumulation of some fish waste product that has the repressive activity is unknown.

Some observations indicating that the action can occur even in quite large ponds were given by Dr B. G. Whiteside and Dr F. J. Richan of the Southwest Texas State College in THE PROGRESSIVE FISH CULTURIST in July this year. Goldfish in a pond one-third of an acre in area were found to spawn within about 24 hours after being removed to other ponds newly filled with river water. The original pond had been stocked 3 years before and the only water additions to it had been from rain and river water to replace evaporation

losses, so that it could be assumed to have accumulated quite an amount of wastes and secretions from the 250 goldfish, 150 largemouth bass and sunfish that it was found to contain when drained.

Although other explanations of the

observations could readily be put forward, it is worth bearing the possibility in mind of inhibitory effects from the water when pond spawnings fail and trying out the old recommendation of a change of water.

Mooning Around

WHAT with the excitement of the lunar landing and the results of the photography of Mars, awareness of the other planets of the Universe could hardly fail to be aroused for most people. Did moon-mindedness also influence people's everyday activities in any way, we wondered; in particular, it seemed our special province to determine whether aquarists showed any reaction.

Accordingly, a brief survey at aquatic dealers was put in hand to enquire whether there had been any evidence of a marked upward swing in the sales of moonlight gouramis or moon platys, for example. Unfortunately no trader could give any kind of support for the suggestion of an effect on business from the news of man's momentous penetration of outer space. Except for one, that is, who when *PFM's* investigator put the question to him said, 'Not really, but I've certainly shifted a lot more aquarium gravel recently', glancing up at a shelf holding bags labelled 'Lunar Dust—excellent for Aquatic Plant Growth'.

Father of the Fancy Guppy

Paul Hahnel

AT the beginning of July, the greatest heart in the guppy world ceased to beat—that quiet-spoken, modest American, Paul Hahnel, passed away in a New York hospital.

As a violent anti-Nazi, Paul with his family emigrated to America before the second world war and settled in New York. Though he had kept tropical fish for many years it wasn't until 1942 that he purchased a few common guppies. From that modest beginning he produced the first of what we now refer to as 'fancy guppies'.

It took this master craftsman in wood (he was a cabinet maker by trade) 8 years to reach the top; by 1950 his tanks were brimming over with fish the likes of which the aquarium hobby had never seen. When Dr Leon F. Whitney used Paul's fish to illustrate his book in 1952, readers expressed scepticism, even downright disbelief, that such guppies existed outside of the mind of the author and artist, but I wasn't amongst the doubters because through correspondence I had exchanged with the *New World's* latest 'genius' I realised that this modest breeder—who would forbid his friends to disclose his home address, such was his shyness of publicity—was rapidly becoming a legend in his own lifetime.

The rest of the story is now history: in March, 1954, an article about Paul appeared in *THE AQUARIUM* (U.S.A.) entitled 'The World's Greatest Guppy Breeder'; in August 1955 *COLLIER'S* magazine did a colour supplement about the fish P.H. had been persuaded to exhibit by Earl Schneider at the Pet Trade Fair in New York; in 1957 he was elected Pet-o-Rama 'Man of the Year'.

In August, 1963 he came to

Britain for the second time and I had the pleasure of introducing him to the members of the Fancy Guppy Association. At a dinner given in his honour at Belle Vue Zoological Gardens, Manchester, he told us about his 'goopies', as he fondly called his super pets. He left us for Germany to receive the gold badge of the D.G.G., their highest award for achievement.

Two years later, thanks to the hospitality of American hobbyists, Paul and I stayed as the guests of the Stimson family in Indianapolis, and all travelled about the States to-

Continued on page 242



A happy occasion in 1963 when Paul Hahnel (centre) judged at the Fancy Guppy Association Show in Manchester. Paul Hahnel is seen here with Mr and Mrs Jim Kelly

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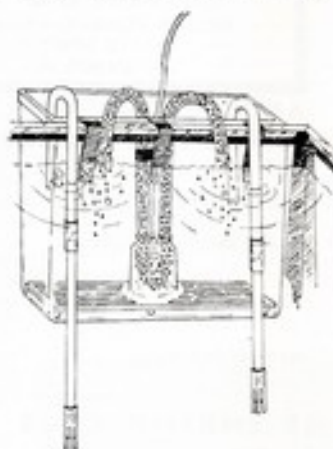
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Your comments and views on all topics of interest to aquarists are welcomed. Address letters to PFM Letters, 554 Garratt Lane, London S.W.17

Questions for Thermostat Makers

A QUESTION arose at our last society meeting that might give manufacturers food for thought. Some of our members wanted to know why manufacturers put the break in the thermostat wire, for connection to the heater, so close to the top of the thermostat where there is a danger of shorting through condensation etc. It was felt it would be better just to leave a complete wire.

Secretary, Norwich & D. A.S.

P. GROVES

HOW I wish that makers of thermostats would get together to agree on what the indicator lights in their instruments are supposed to tell the users. In some

thermostats the neon light glows when the thermostat has switched the heater off, in others it glows when the heater has been switched on. The latter seems to me to be the most meaningful arrangement. One type of outside-fitting thermostat (no longer being made) used to have a press-button that also caused the neon light to come on when the button was used, so that a check could be made that all was well with the heater-thermostat circuit at any time. I would like to see such a device available once more.

Reading, Berks.

R. PINFOLD

One Society's Methods

I HAVE read over and over again Jim Kelly's article 'Is Your Society Working?' in the July/August edition of PFM and failed to detect any practical suggestions. Everyone knows about 'cliques' within societies. The best method is for people to take on a job of work; as Mr Kelly says—'Participation'. I do feel that the subject should not come under the heading of fishkeeping. There are plenty of people enjoying that facet. The problem is fish club management and once you become involved there is a strong possibility that the fishkeeping side might suffer—many members are lost on this point alone.

Consider the two extremes of fish club life: there are clubs with five or six extremely knowledgeable aquarists who meet each month at a member's house; at the other end of the scale, there are the large societies which need organisation. I'm sure it's the latter that Jim Kelly is writing about.

My Society, the Hendon & D. A.S., must work to survive. Our subscription hasn't changed for over 20 years—it's still only 10s per year. Perhaps it would be helpful if I told you how we tackle our problems.

We meet every week. This means planning 50 programmes. Our annual Congress attracts an average of 400 people, the Open Show 200-300 people, society club nights 100 people. The annual Dinner tops 100 people. Every year a team goes to Belgium. We run a tank-hire scheme, which means some 300 tanks to be maintained; we offer a tape and slide service, and members go out to give lectures and compete in open shows. We have storekeepers, librarians, catering staff.

All this means organisation. We believe in a large, active committee. Let me list their occupations: communication engineer, civil servant, accountant, insurance agent, builder, chemist, electrician, architect, garage proprietor, mechanical engineer—ten in all. I list them deliberately to stress my first point. To get the best results in club matters you must trade on the professional

people with their specialised skills—though this is poor relaxation after a day's work! Still, if a person wants something completely different they should join a golf club, not a fish club.

For the purpose of shows, we function as a typical factory. Each committee man takes on the title of foreman, i.e. foreman carpenter, foreman painter, foreman electrician etc. The members divide up under foremen. The juniors become apprentices. It's fine to see them as a team, goggles on, using power-driven wire brushes peparing tanks for glazing and painting. On occasions like this you feel that work managers would be delighted with such production teams.

This means that members are invited to participate but they must be led by organised experienced leaders. If any foreman or committee men fail—the club fails. Fish club work is heavy; nothing is worse than rocks, water, angle iron and glass. Computers won't help, limited motion study does. Remember, you can't order people—it's usually a question of leading with good examples.

Clubs who produce magazines always are asking their members to 'participate' by sending articles. They always get poor response. What a fine example is set by the top brass of the F.B.A.S. led by Ted Jessopp. They are complete slaves to the hobby. I am sure they would like to know a formula for spreading their load.

Surely Jim Kelly has his facts wrong about 'boring work'? It's a very serious problem today. People have their work broken down into planned timed units. The older generation participated in all the skills of their trade. It is appreciated that people are working less hours but to see brass stampers in the Midlands, auto screw machine at a ballbearing factory, vacuum forming, all means very hard work. Surely noise is the modern curse. So what better hobby can you have than ours? But beware.

Is it to be the peace and quiet of the fish house or the committee room?

Finally, the current problem in our Society is 'How do we encourage the wives to participate?' We are desperately short of active ladies. Can you help us Mr Kelly?

Chairman,
Hendon & District Aquatic Society

HENRY G. WHITE

Colour Slide Exchange

I WOULD like to obtain two or three colour slides of different 3 ft. tanks, fully furnished as set up for a show, containing sand, rocks, plants and fish. The tanks would need to be of a high standard. In return I would

send two or three slides of 2 ft. tanks which were judged first in two different shows. Is any reader able to help in this?

483 Plenty Road,
Preston 3072, Victoria, Australia

R. G. BRADLEY

Sweet and Sour

UNLESS Arpee actively wishes to become a victim of the 'thousand knives' I would ask him to refrain from remarks such as appear in his Personal Comment in your September issue.

(no address given)

CHINESE MANDARIN



Photo:

BRIAN FURNER

Flexible welded wire mesh fixed to stakes around a pond need not be obtrusive and makes for safety when very young children are about

Safety First

THE subject of garden pools and safety was mentioned in a recent issue of PFM. This is a subject which caused me some thought when I embarked on fishkeeping. My many visitors bring their young offspring and I have no wish to be involved in a case of accidental death through drowning!

In August the gulls return to spend the winter months here. Herons are accused of having cleared fish from many pools in the area. 'Weldmesh' (8 in.) around the pool (see photograph) now prevents the possibility of accidental deaths! This, coupled with 8 in. square nylon netting draped over the pool, also protects the fish from gulls and herons.

Erith, Kent

BRIAN FURNER

The Aquarium Show 1969

Wednesday 29th October to
Sunday 2nd November

at the Royal Horticultural Society's Old Hall
LONDON S.W.1



•THE AQUARIUM SHOW will open to the public at 2.0 p.m. on Wednesday, 29th October, and at 10 a.m. on succeeding days. The show will close each evening at 9.0 p.m. (earlier on Sunday). Tickets at the reduced rate of 2s 6d for adults, 1s 3d for children, can be obtained by ordering (with remittance sent in advance) from PFM's offices for parties of 12 or more. These con-

cession rates apply only to advance cash bookings and cannot be made available to unbooked parties arriving at the door during the course of the show.

•SHOW schedules and entry forms for the individual fish competitive display have been sent out and additional copies can be obtained from the Show Secretary, Mr H.

Aquarist in GHANA

A report from DAVID BLAIR, a young Scottish aquarist and professional zoologist who has been collecting fishes and aquatic life in Africa this summer.



The accompanying report was sent from Tema (2 on the map of Ghana above), near Accra (1). Akosombo (3) is where the Volta Dam is built. Ada (4) is at the mouth of the Volta.

ABOUT 2½ hours after leaving London the aircraft crossed the north African coast at Algiers and, 5 hours out, the Niger at Niamey was faintly visible.

Last year at this time, the rains had set in with a vengeance and the annual parade of floods, washed-out and swamped villages was well under way. During my first day here I went for a short trip to a stream about 10 miles from here in the savanna country characteristic of this part of the coast. The warm, turbid pools I found were in surprising contrast to the torrent at this spot last year. I waded with my net into one side pool and started gouging holes in the bank with a few wild swipes to see what came up. One or two jewel cichlids (*Hemichromis bimaculatus*) were caught. Although in quite good colour, these fish were still immature and the largest was less than 3 in. long. Although they were beautifully marked, these cichlids are vicious beyond belief and I usually throw them back.

This particular pool is the only place I know where first-class specimens of *Fundulosoma thierrii* are reasonably abundant. I can pardon the average aquarist if he blinks a few times at that name. However, some killifish fans might possibly have come across the name '*Neohobranchar waltoni*', which has been wrongly applied to this species. As far as I know, there are only very few live specimens of *Fundulosoma thierrii* swimming around in tanks in Europe and N. America, but this is something I hope to rectify. The males are really brilliant in colour. Despite the fact that they rarely exceed an inch in length, these males outshine most *Aphyosemion* males. The body has a bluish sheen on the sides, merging into an intense red-orange colour on the posterior third of the body. The body, as well as the dorsal and caudal fins, is spotted with small red-brown marks, and all fins are bordered with red-brown margins. All the unpaired fins show an intense orange colour and the

Towell, at F.R.M.'s offices. Entry is open to all, society member and non-member alike. There are 25 classes and each entrant can put two fish in each class (final closing date for entries is 30th September):

- B Barb
- C Characin
- D A.O.S. Cichlid
- DA Angel
- E A.O.S. Labyrinth
- EA Siamese Fighter
- F Egg-laying Toothcarp
- G A.O.S. Catfish
- H *Corydoras* and *Brederia*
- J Rasbora
- K Danio and W.C.M.M.
- L Loach
- M A.O.S. Egg-layer
- O A.V. Male Guppy
- P A.V. Female Guppy
- Q Swordtail

- R Platy
- S Mollie
- T A.O.S. Livebearer
- U Singletail Goldfish
- V Doubletail Goldfish
- W Native and Foreign Coldwater

Some specially attractive trophies are being awarded in all classes as well as the special challenge trophies.

● **GOLDFISH** classes at this year's Show, selected by the F.B.A.S. Judges and Standards Committee, give scope for entries of goldfish types not catered for in last year's event. Although some popular types do not appear in the list, this was done to give emphasis to a fresh set of varieties, and follows the aim of giving a variation of goldfish classes for entrants year by year.

● **BIG Show news from the British Killifish Association is that the exhibits in the Association's display that will form part of the B.K.A.'s International Killifish Show are to be judged by Mr Leif Christensen, who will be coming to London from Denmark specially for the Aquarium Show.**

● **THROUGHOUT** the Show period the safety of the fish exhibited will be looked after by stewards all through the night as well as by day.

● **ON** Saturday afternoon and Sunday afternoon during the Show talks of special interest to fishkeepers will be given in the lecture room of the R.H.S. New Hall, which will also be where presentation of prizes to winners will be made (on Sunday, 5-30 p.m.).

coloured margins of the slightly trilobate caudal are often produced into narrow filaments.

Fundulusoma thieryi is supposed to be a strictly annual fish, but I have my doubts about this. The presence of water lilies in the pools where it occurs suggest that these pools contain water for most of the year. Also, I have just caught large adults, and these must have been juveniles at the driest time of the year (January to April), when there is little water in these savanna streams and pools. The eggs of *Fundulusoma* do not need to be dried out. As a direct contrast, these same pools also contain a rivulin species which appears to be strictly an annual, being found only in the first half of the wet season (June-August) and spending most of the year as resting eggs.

The savanna pools I have mentioned are often exposed to the full heat of the sun during the day. The result is a very noticeable stratification of water temperature despite the fact that the average depth of these pools is only in the region of 2 or 3 feet. On a hot day the surface waters can be almost too hot for comfort while the muddy bottom feels downright cold. Since water layers of different temperatures do not mix well, I sometimes wonder how the fish in the lower layers receive enough oxygen.

I remember a similar situation in a stagnant arm of the new Volta Lake (which has piled up behind the Volta Dam at Akosombo). We had wangled a trip on one of the research boats operating on the Lake, and a Hungarian water chemist, Dr Enty, was taking water samples from different depths. The bottom layers of water in this stagnant area (depth 30 ft.) had very little oxygen, so that fish grubbing around for food had to 'take a deep breath' and dive into these zones briefly before 'surfacing' into more aerated regions. This explained why we didn't land any fish when we put our fishing lines down to the bottom.

Another inhabitant of pools containing *Fundulusoma thieryi* is the lungfish, *Protopterus annecton*. These slippery monsters have a family tree that makes dinosaurs look like evolutionary infants. Millions of years before the first dinosaurs appeared, lungfish were fossilised, wrapped up inside their mud and mucus cocoons. The largest lungfish I have caught myself were about a

foot long, and quite easy to keep. I have seen other lungfish 3 ft. long and heard of others 5 feet in length or more. I have a peculiar system for catching lungfish. It consists of shoving my large scoop-net hard against a muddy bank, then stamping hard on the edge of the bank. This frightens the lungfish out of their burrows in the mud.

As well as ordinary, everyday fish, the pools I have fished around here contain an exotic collection of invertebrate life some of which would be suitable for a community tank. Although there are plenty of water scorpions, water beetles and dragonfly larvae, I think pride of place must go to the freshwater crabs (I saw one yesterday at least 3 inches across the shell) and shrimps, crayfish (call them what you will, the locals call them 'lobsters'). Despite the fact that I have seen *Paralomis*, the crayfish, up to 15 inches long including pincers, these animals seem to be quite safe even with the smallest fishes. I have known crabs attack diseased fish but, generally speaking, they are quite safe as well.

Large crustaceans such as these, with all their flickering, clicking appendages, are a fascinating sight. However, the aquarist with one large shrimp in his tank might be shocked to suddenly find two equal sized shrimps gazing at him. This phenomenon is, of course, not merely due to alcohol, but is a result of moulting, the sloughed cuticle of the shrimp being almost identical with its live, clicking, ex-contents.

Yesterday afternoon my young brothers and I went to the Dodowa River about 12 miles north of here. There was very little doing there, and a couple of hours netting yielded practically nothing. Last year, at this spot, I did quite a lot of fishing and landed a number of unusual fishes.

Epiplatys bifasciatus is a beautiful

toothcarp rarely seen in Britain. Wild-caught males are brilliantly marked with oblique streaks of red, and the fins have a yellow or orange tinge with red spots. When frightened, males lose much of this coloration and adopt the female livery of a single dark horizontal line. Unfortunately, most males lose this brilliance of colour in captivity unless kept in suitable surroundings, and 'ideal surroundings' in captivity would probably be warm, murky, shallow, densely planted tanks with a muddy bottom in which the fish would be invisible anyway. As several people have mentioned, the male *E. bifasciatus* here far outshines the wild males of *Aphyosemion béritanum* that are found in Togoland, about 120 miles east of here.

Last year I found a shallow weedy patch where I could catch dozens of *E. bifasciatus*, but at the same spot yesterday I caught only two females which seem to be diseased.

The other toothcarp at this spot is the estuarine lamprey, *Apocheilichthys spilargentea*, which reaches a size of 3 inches and shoals near the surface.

The other day I stopped at a small stream in the savanna about midway between Accra and Ada at the mouth of the Volta. Apart from a hugh goby (*Eleotris vittata*) and the usual sprinkling of drab *Barbus*, there were a number of a small silvery characin. This fish, reaching about 2½ inches, is probably a member of the genus *Micvalentes* (or possibly *Vivahia*) and this locality is the only place I have ever seen it. A rather small-scale map of Ghana shows a little river at this point, which doesn't appear to be connected to the Volta system at any point and runs into the sea about 20 miles west of the big lagoons at the Volta mouth. I will preserve some specimens and try and identify the species.

Paul Hahnel

Continued from page 234

gether. It was on such trips that I really got to know Paul and how he had achieved his success. Perhaps some day I might be privileged to write the full story of how he became the Father of the fancy guppy.

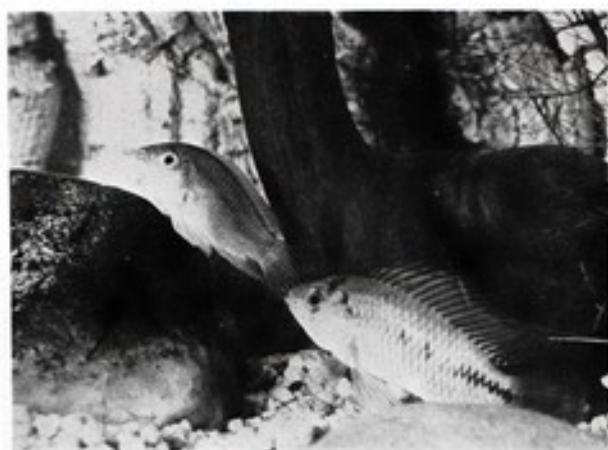
Shortly before he passed away, I received a letter from the maestro, as

usual full of his good natured banter, correcting my German, a language that despite his long domicile in the U.S. he still clung to.

The world has lost a pioneer, and I and many others have lost an old friend; the hobby is bereft of a man who made so many fishkeepers happy and some even a little envious. To his family, Martha and Rosie, we send our condolences.

JIM KELLY

A Dwarf among Dwarf Cichlids



This is the pair of yellow dwarf cichlids whose breeding is described in this article

Apistogramma reitzigi E. Ahl

By RUDOLPH ZUKAL

Photographs by the author

Translation by F. MARSH

THE yellow dwarf cichlid is amongst the smallest of the cichlids, and since its importation into Europe in 1936 from the central basin of the River Paraguay, it has become one of the best loved of the dwarf cichlids. One reason is that it is so suitable for the community tank. Indeed, because the fish is rather shy, care should be taken not to put it in with very boisterous fishes. The males grow to about 2½ in., and the female only attains half this length. However, the males, who carry on a fair amount of harmless buffeting with fins and jaw-tugging among themselves, often seem afraid of the much smaller female. The fish are usually peace-loving and do not stir up the gravel except at spawning time, although they live near the bottom.

A medium-sized, thickly planted, well lighted tank furnished with stones is an ideal home for them. The water should, if possible, be soft, slightly acid, not too old, and well aerated (these fish are susceptible to any chemical change in the water). They are very quiet, do not move around much and lead a somewhat secretive existence. However, with plentiful live food they should thrive in such conditions

Reaction to a second female

After the breeding pair had selected a spawning site—the surface of a rock close to a submerged wood branch, another female dwarf cichlid in the tank began to intrude (top right picture). The male developed very dark colours, spread his fins and threatened the intruder (picture below). Later both male and female attacked and drove away the intruder female from the chosen spawning site



and if a few hiding places are present in the community tank for them we can observe their spawning there. The female's care of the young fish is unique.

The spawning proceeds as with the other cichlids, though it is difficult to recognise when the female is ready to spawn because she does not become noticeably full. An experienced breeder can recognise the moment, however, by her spawning colouring and behaviour of the fish. Spawning can take place in a small tank, filled with water taken from the community tank at a temperature of 79°F (26°C). The fish should not be disturbed during spawning and it is advisable to darken the tank with paper placed round the outside. The female lays her eggs on stones or on a substantial plant leaf, or even within a

At first the rock was cleaned by the female whilst the male watched. As she began to spawn the male swam up to her with folded fins



After each deposition of eggs and their fertilisation by the male the female inspected them and continued to clean the rock



During spawning several different postures were adopted by the pair, as can be seen in these photographs, which also show that the eggs are quite large



An additional spawning site used by the pair of *Apistogramma reitzigi* described in the article was the inner surface of this old flower pot, in which the fish are seen with their eggs

flowerpot. When the spawning is complete the male should be removed to prevent his being mortally injured by the female.

The third day after the spawning the young wriggle on the stone or leaf and there they are cleaned and tended by the female and often carried by her from one place to another. If the female suspects danger, she remains in the 'rudder' position and then, slowly swimming backwards, gathers the young round her. The fry should be fed, after the yolk-sac has been digested, on dried fry food. After 14 days the fry are independent and the female should then be removed in case she should attack the young out of anxiety or fear. Incidentally, there are usually more males than females in a brood.

I can really recommend these dwarf cichlids to any amateur for they are extremely interesting to watch.

What's New?

For Your Filters

AMONGST the comprehensive range of filter media being offered by Fish-E-Quip Ltd (Shrewton Road, Tooting, London, S.W.17) is a new

version of a long-established filter medium, glass wool, that should go a long way towards winning back its erstwhile adherents lost to modern synthetic fibres. This is the **Quip Filter Mat**, fine glass wool processed in flat, springy layers that makes for ease of handling. The material can be cut to fit any size of filter. As well as **Quip Glass Silk**, the more conventional glass fibre filter medium, the range also includes a fine, soft Terylene filter medium that may be used again after rinsing and sterilising in boiling water.

Also packed in the distinctive black and white **Quip** boxes are Filter Charcoal (wood charcoal) and fine Peat Fibre.

As well as for acidifying the aquarium water when the peat is used as a base under the gravel or

inside the filter itself, the manufacturers suggest that the peat can be used to give cover to certain types of killifish eggs and as a medium, when boiled and mixed with the wood charcoal, for white worm and Grindal worm cultures. Price of each pack of the products mentioned here is 25 6d.

Fish Standards

LATEST Federation of British Aquatic Societies publication is **SHOW FISH GUIDES & TECHNICAL INFORMATION**, a booklet of 24 pages uniform in size with the **CULTIVATED TROPICAL FISH SHOW STANDARDS** published by the F.B.A.S. 5 years ago and, like it, costing 25 6d.

Readers' Queries Answered



Detection of Fin-nippers

I have a fin-nipper in my tank and I cannot see which fish is the culprit. Is there an easy method of doing this? The tank contains amongst others two fairly large angels, a Siamese fighter, Buenos Aires tetras and tiger barbs, any of which I understand could be the culprit.

Yes, you have several types partial to fin-nipping in your list and, of course, more than one of them could be indulging in this annoying habit. Other than removing the suspects one type at a time to another tank to see if the trouble ceases, the only method that you could try is one that we have used with success on occasion. Keep the fish without food for 2 days and then spend a little time watching the fishes without disturbing them. If no fin-nipping is witnessed continue to withhold the food and to watch the fishes periodically. This can go on for at least a week without harm to the fishes, and it is quite likely that within this time you will see the guilty fish or fishes make some approach to the 'nipped' types, or else you will be able to deduce from the behaviour (avoiding reactions) of the 'nipped' types just who is responsible. Siamese fighters, in our experience, are the ones most difficult to detect as fin-nippers and appear to show most activity of this kind when the tank is in darkness.

Unwanted Pond Life

I am very upset to find that my pond is infested with leeches. They are very tiny things, some are pale brown and some are quite transparent but each handful of duckweed taken from the top of the pond is infested with them. Will they harm my fish and how can I get rid of them?

Not all leeches are harmful to fishes and it is by no means certain

from the description and few details you give that you have seen leeches at all. Place some of the animals in a jar of water and observe them for a while. Do they 'glide' over the glass, 'walk' by alternately arching and straightening their bodies or do they swim with a wriggly motion through the water? If the first method of locomotion is shown they could be planarians—flat creatures, pale in colour, showing no worm-like segmenting lines on their bodies. The second and third movements are shown typically by leeches, which do show the ring-like segment markings around their bodies and most often are dark-coloured. If the fish in the pond show any signs of discomfort as they swim or exhibit raw patches on their bodies then any leeches present would have to be regarded with suspicion. Eliminating them is far from easy, short of completely emptying the pond—feasible only if it is a small pond. From your letter it seems that removing and discarding the mat of duckweed will remove a good many of the creatures with it. Unless the fish are known to be under attack our advice would be to leave things as they are—it is very likely that the creatures will naturally lessen in numbers or disappear, perhaps after the autumn.

Small Pencil Fish

*I am hoping to spawn a pair of *Nannostomus anomalus* but I should appreciate any hints in advance as to how to feed the expected fry.*

Newly hatched fry of this tiny tropical fish are minute and when they begin to feed require the very smallest sizes of infusorians or food particles. Even the adult fish find difficulty in eating large *Daphnia* because of their very small mouths:

the genus name *Nannostomus* is derived from the Greek *nannos* (small) and *stomatos* (mouth). However, the problem of fry feeding does not arise for some 4 or 5 days after hatching (at 75° F; 24° C) as the yolk sacs are absorbed very slowly. After this period of time, green water and Infusoria from a young culture can be introduced, or a proprietary liquid fry food given. These very tiny fry must have food available most of the time and the best means to achieve this is by a 'drip' if a good Infusoria culture is available. Air-line tubing used as a siphon, with a clamp on it to make it flow at drip rate, will provide for continuous feeding. Clear the tube and flush it through with fresh culture as often as you can because it is likely to become blocked at such slow rates of flow or clog to a degree where drops having a very low content of infusorians are being delivered to the fry tank. Once the fry are growing well, newly hatched brine shrimps or *Cyclops nauplii* and, later, micro worms and powder fry foods can be introduced. Rate of growth is not very swift but do not forget that size of rearing tank also plays a part and that the fry to be reared should have ample swimming space.

Grading Live Foods

Is there an easy way of separating big water fleas from smaller ones and sorting different sizes of brine shrimps so that I can give live foods of the right size to my young fish?

There is a very handy set of sieves on the market that will do this job for you. They are the Nuova Sieve Combination, sold as a nest of four neat plastic boxes each about 3 in. by 3 in. and having a mesh bottom (0.960 mm. mesh to 0.125 mm.). Food particles in suspension, such as hard-boiled egg yolk, can also be graded with these sieves and we have found our set a most useful addition to the fish room.



Personal COMMENT by ARPEE

THE tropical freshwater enthusiast is often tempted into marine excursions by the colourful and exotic appearance of so many saltwater varieties, but he either funks it or goes into it with everything he has, and more often than not comes to grief because of lack of planning. It is encouraging to read letters from readers such as those published in *PFM* earlier this year that things may not be as difficult as they seem, but I think most would agree that it is as well to have a fair amount of experience of freshwater fish-keeping before becoming more ambitious.

A point which spoke volumes in one letter was the fact

prices being asked for even small specimens. It so happened that I felt that something needed to go with my adult angels—something with a bit of 'bite' in its colouring. Under Gro-Lux lighting almost anything with red in it looks good, but I resisted the obvious—red swords or platys—and decided to introduce some clown loaches and red-tailed black sharks. As others in the hobby will have noticed, it is one thing to make a decision and quite another to achieve the means by which it is carried out. There were no sharks around of any sort of size and I had to wait weeks for some loaches, but a superb 'pair' suddenly appeared from a broken-down collection and I quickly gathered them up. I was most impressed with my purchases.

Seldom do new fish look and act as well as these did, and they were taking worms from my fingers within a week of acquisition. They were extremely active, and one looked so different in body shape from the other that I thought I was on to a pair. Such is the optimism of the aquarist! They were quarantined for a month, as they are reputed to be as susceptible to white spot as anything



The clown loach
(*Botia macracanthus*)

B. KAHL

that the reader was using natural sea water; it rather reminds me of the countryman who claims that rose-growing is easy, but forgets for the moment that cows and horses don't live in towns any more. I have little doubt that, in the course of time, I shall follow the marine enthusiasts, or attempt to do so, but for the present I shall have to rely on some of the more sensational freshwater species to satisfy my wishes for something out of the ordinary.

Not so long ago I was rather indifferent to the charms of the clown loach (*Botia macracanthus*), and this attitude was influenced in no small part by the high

else in the book. I was greatly looking forward to introducing them into the big tank, as I had not seen them under Gro-Lux before, and when the time came I was absolutely convinced that I had done the right thing. They looked quite marvellous, and the way they took to the new environment was most encouraging—they looked just right, though I could have done with a big black shark or so to provide the contrast.

The effect was short-lived, however. Within an hour or so the whole place was like central London in a pea souper, as the wretched things were rooting around like pigs, and even the stately angels were looking a bit upset.

I took my own advice and did nothing, hoping that the sediment would settle. By the morning, it had, but the following evening it was just as bad again, and I began to wonder whether the price of keeping these beautiful things was a permanently gloomy tank or one of those highly costly super filters which I told myself I couldn't afford. I hastily slipped in an old air-lift filter which I had in store, and it seemed to improve things a bit, then everything got suddenly bad again.

I realised what had been causing the trouble, but for the life of me, I cannot think why. The food I had been offering was variously earthworm, *Tubifex*, *Daphnia*, white worm and flies. On the days when I fed with white worm there was always trouble, as for some reason the loaches rooted round for uneaten specimens till they were all gone. Why this should not have happened when I fed with *Tubifex* I do not know, as I always cut it up and it is never all eaten at once. It could be that it is less of a prize, as I have always contended! It certainly has less movement and, therefore, attraction than encytrae. We got things right in the end by feeding in some form of rotation. This, coupled with the valiant little filter, seems to have done the trick.

The clown loaches held our constant attention for some months and I really thought we were on the way to success when the colours brightened significantly and when they paid particular attention to one flat stone in a corner of the tank. The fact that one of them was fattening nicely increased the illusion. You have to keep these fish to appreciate the turns of speed they can put on without appearing other than the sleek things they are, and without detriment to the furnishings of the tank. Like the little *Otocinclus*, I have seen them browsing around the flanks of the angels and often hanging on, to the annoyance of nobody and to the liking of apparently all concerned.

One day I was saddened to see one of the loaches dead. It looked as perfect as on the previous day, and I have no idea what lay behind the tragedy. One thing is certain, and that is that there will have to be some companions for the survivor when I can secure some. This is too lovely, and too engaging, a creature to see its time out without the comfort of those of its kind. It is highly unlikely that the average aquarist will ever get far in breeding it, since specimens in the wild reach a foot in length, but I am not depressed by this as the unattainable is a wonderful spur. Whatever your motives in keeping fish, this is one you can really get to like; its name is

singularly apt, and whatever you may have heard to the detriment of the *Cobitidae*, forget it and try the clowns.



With the passing of the close season for coarse fish in the United Kingdom many thousands of worm and millet-baited hooks are cast into the waters. I would hope that those who indulge in the fascinating art of angling can see the way to some of the ethics which guide the fishkeeper. The target is the fish, and the fish is a creature with some feelings, the precise nature of which we can only guess. It is nevertheless deserving of the same sort of consideration that should be given to any other victim of the chase.

Anglers go and catch fish because they want to eat them, to sell them for eating, to put in a glass case, or to add to their ponds. I do not class as anglers those fishermen who go and catch thousands upon thousands of little fish, imprison them in keep-nets, weight them and tip the bodies back into the water as the sun is going down. If you are catching a fish to eat or stuff, kill it quickly with a gaff. If you catch a fish you don't want, wet your hands in the water before attempting to handle it, unless of course you like torturing cold-blooded creatures with the heat of your hand. Try not to drop fish into the dusty earth on the bank of the water—this is about equivalent to a human taking a roll on a bed of nails—and if you have to use a keep net, try to ensure that it is big enough for what you want, and that it is in the shade.

I very much like to spend an hour or so with a rod and line, though I must admit that my conscience pricks when I catch a fish, which is not all that often. As I usually bring home alive what I catch—such is the wonder, I usually get the consolation that, with proper care, the fish are not markedly worse off than they were in the wild. I have a pond in which there are some roach and rudd, and I hope to add some gudgeon this season. There is much to be said for a 'native' pond in your garden if you have the space. It is true that wild fish are rather more scary than goldfish and less sensational than orfe, but they have a subtlety and a hardness which appeal to me, and the price is very much of a consideration these days.

There will be those who will criticise me for recommending the introduction of wild fishes to domestic ponds. I suspect that their objections will be that such fishes are disease-ridden and therefore sources of possible danger to the others present. I agree that a month's quarantine (longer if you like) is essential, but if, after this time has elapsed, the specimen looks really healthy, I suggest it is quite suitable for any company.

If you have any doubts, just go along to any dealer in coldwater fishes and examine the specimens there of orfe, tench and similar species. The average have many scales missing as well as torn fins, to say nothing of those nasty looking contusions on bodies. These are the victims of transportation, but they are perfect subjects for all the disease going. Last year I bought six fairly good looking golden orfe, which went into my big pond containing shubunkins. None survived. The previous year I caught 20 roach and rudd on hooks. They went into a small pond. Two died, and the rest have doubled their size. Trade comments invited.

Saturday 1st November

3.30 p.m.

Illustrated talk by LEIF CHRISTENSEN
(chairman, Copenhagen Killie Association)
Show of Films of fishkeeping interest

Sunday 2nd November

3.30 p.m.

Illustrated talk by JIM KELLY
(chairman, Fancy Guppy Association)

**All at The AQUARIUM SHOW
in LONDON—see also page 240**

Decorative Aquaria Installations

By H. J. GILBERT

WHEN we start fishkeeping our set-ups are invariably functional rather than aesthetic. One tank, usually rather small, rests on a bookcase, sideboard or a trade-made contrivance called an aquarium stand. This is just what the last-named is and no amount of camouflage will make it fit in with your furnishings. If tropical fish are to be kept, and it is safe to assume in the majority of cases this will be so, there will be a wonderful tangle of wires for lights, heaters and pump, not to mention the airlines. All in the open and easy to get at 'in case anything goes wrong'. Nets, food, jars or even another small tank are handy for the same reason.

Then comes the day of reckoning. Either one's infant offspring becomes mobile and starts investigating or the wife suggests that the room needs redecorating and 'while you are at it how about doing something with that mess'. Thoughts then turn to something that has until now not been given much consideration. How was one introduced to the hobby of fishkeeping? The chances are that it was a nicely positioned and carefully furnished aquarium in a friend's house, at a show or in some public place such as a waiting room or maybe the lounge bar of your 'local'. It might even have been in your nearby pet shop or aquaria supplier's premises. I say 'might', because although the more enlightened and go-ahead dealers have realised for years that it is a tastefully situated and carefully planted aquarium containing colourful and full-grown fishes that really sell their other stock, even the smaller establishments are putting up some sort of a show now. True their efforts vary greatly because the art of setting up a furnished aquarium cannot be learnt overnight, but they do at least attract the general public. Even the ardent aquarist on the prowl, looking for a particular fish or plant, will cast his eyes in the direction of an original set-up tank in case it contains at least an idea he can work on, or even reveals the object of his search.

Fish Tank in a Wall

Possibly at this stage the realisation begins to dawn that one's own sparsely planted tank with its collection of trailing wires and other impedimenta does not add to the room's appeal let alone advertise the hobby. Personally I had been through these various stages, and evolved what I thought was a reasonably foolproof and artistically acceptable set up. When, as the secretary of the local society, I had a request from the architect of a hospital extension for any information I could give him with the installation of a fish tank in the wall of a waiting room, this seemed to be a heaven-sent opportunity to put my theories into practice. However, to be

on the safe side I consulted my friends and then decided to check our ideas from books and magazines. It was then that I realised how little work has actually been done in this direction. True there are descriptions of various set-ups available, in elaborate detail, but no guide-lines as to how to achieve the best possible result. The reason for this is obvious. For maximum decorative value each aquarium has to be an individual job considered only in relation to its own site and what it has to achieve. No-one has been brave enough to suggest any basic rules that might apply to almost any set-up.

With the tank for the hospital waiting room it would seem easy to achieve perfection. Only the footings were in place when I met the architect on the site. We discussed all the relevant points, position and size of tank, lighting, heating and height from the floor (to be governed by the fact that most people would view it from a sitting position). Decoration of the surrounding wall and the fact that installation and servicing were to be from the rear would enable the front to be enclosed by a suitable wooden frame. Rear access was to be very conveniently provided from a non-public corridor and could be suitably closed off by doors.

So having made the point that at least 12 inches above

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Black Phantom Tetras

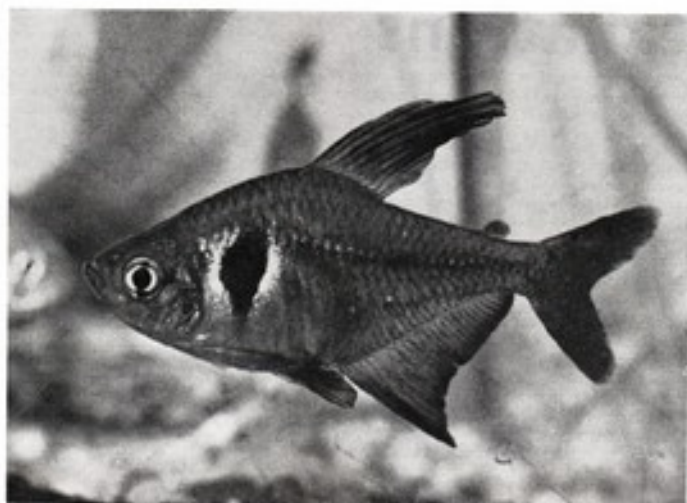


Photo:

MARCUSE

THIS Brazilian characin is known to the ichthyologist as *Megalomphodus nigrofasciatus*; the name is bigger than the fish, which grows to 1½ inches or so. The specific name refers to the enormous dorsal and anal fins of the male. In shape the fish resembles in other respects the serpaes tetra.

It is unusual among characins in that the male and female are very different in colour and finnage. The female has a velvety red body with a black dorsal and caudal fin; her pelvic fins are red and her anal fin is red with a black border. When excited the male is mostly black; all fins except the pectorals are black, and his body shades from dark grey forwards to black at the tail. Usually the male shows his fins very well when he is in colour. At other times his fins fade to dark grey and his body becomes a dark pinkish grey. Both sexes have a prominent vertical black shoulder mark surrounded by an iridescent greenish area.

My experience with the black phantoms started when two arrived at a local pet shop in a consignment of serpaes. I didn't buy them until a few days later because I thought they were two males. This only shows how wrong you can be, as after a couple of months of feeding on glassworms, *Daphnia* and various dried foods the phantoms began to exhibit the colour and fin differences that showed they were a true pair. When the female began to fill out I separated the pair and started to think about a breeding attempt. The diet was continued as before with the addition of some coarse *Cyclops*.

For a trial spawning I used an 18 in. by 10 in. by 10 in.

tank near a window. The tank was set up with water from the two tanks in which the phantoms were living (because an earlier failure with red phantoms had suggested that this type of fish might dislike new water). The tank was furnished with a thin layer of gravel, two mops of nylon wool hung from floating polystyrene foam blocks, and a low mat of nylon made from an unravelling panscrubber. Water temperature was 78°F (25.5°C). When

By ALAN CHARLTON

the fish were introduced they seemed to resent being watched (hardly surprising!). However, they spawned some time on the fourth day. Reddish-brown eggs were visible on the bottom under the hanging mops and under the nylon mat; they hadn't stuck to the nylon. I removed the phantoms and waited for the eggs to do something; they turned white and there was no hatching. However, the trial spawning had shown what to expect in the way of spawning behaviour.

For the next spawning attempt 2 weeks later the same tank and spawning medium were used, but this time the tank was disinfected with strong potassium permanganate solution (followed by several rinses of tap water) and the gravel and nylon were disinfected by boiling.

The water was local tap water (originally 8-10'DH), which had been standing over *Sphagnum* peat for several weeks. This peat water has been tested with an electric pH meter at other times and is normally in the region of pH 4.5.

When the phantoms were brought together in this set-up they seemed to like the water, and also appreciated light feeding with *Cyclops*. They spawned unobserved on the third evening; since there were few eggs and the adults showed no inclination to eat them I left the adults in and was rewarded by more eggs the next day. I then removed the adults and shaded the top of the tank.

Hatching began the following evening, rather less than 48 hours after the first spawning. The fry were very inconspicuous, remaining mostly on the bottom for a couple of days, then moving up into the nylon where they hung by long threads. They began to become free-swimming 3 days from hatching. At this stage the fry were almost transparent, but they developed a pattern of vertical black bars within a few days. This pattern persisted for about 6 weeks, gradually disappearing as the fry became pinkish in colour and assumed a genuine fish shape. Almost 100 fry were raised from this stage.

First feeding was started on the morning after the first fry became free-swimming. I used hard-boiled egg yolk squeezed into the water through fine nylon cloth. This feeding was given twice a day for 3 days before brine shrimp feeding was started; as soon as most of the fry were taking brine shrimp, egg was taken off the menu. At this time I changed half the water in the tank for fresh tap water at the same temperature. In addition to reducing any pollution caused by first feedings, a large water change seems to stimulate growth in young tetras, and it can be repeated at frequent

intervals to good effect. One a week is probably reasonable.

The phantoms were introduced to micro worm after a few days, and when they were 2 weeks old I started to give them fine *Diaptomus*, which was to be their main article of diet for the next couple of months. *Diaptomus* is a planktonic crustacean distantly related to *Cyclops* and it is an excellent food for small fish; although it can move extremely rapidly when pursued most fish soon learn to cope with it.

One problem with the phantoms at this stage was to persuade them to take non-swimming foods—dried food, chopped *Tubifex* and so on. They were finally educated by mixing them with more extrovert fish—young neons and copper tetras, but they remained shy of the water surface for a long time.

After the fry lost their barred pattern, they soon began to show black pigment in the dorsal and caudal fins and the black shoulder mark. Their bodies took on the red colour of the adult female and the males did not become distinguishable until about 4 months of age, when they began to turn a rather muddy colour. At 7 months the fish were about an inch long; the males had darkened and their fins had elongated, while the females were filling with eggs. Full coloration in the males was slow in appearing and I suspect that diet might be important here.

In conclusion, I think the black phantom tetra is a spectacular fish when mature, with its strong colour contrasts. It is a good addition to a community of small fishes and is not shy of rather larger fish. This lack of size-consciousness, shared by other good community fishes such as the neon tetra, can occasionally result in needless losses if there are bad-tempered fishes in the community. But the main disadvantage of the black phantom is its exorbitant price when imported.

Decorative Aquaria Installations

Continued from page 251

the tank and 6 inches at either end would be required for the installation of power points, switches, etc., storage of necessary bits and pieces as well as access to the tank the matter was left until setting up day. That was a mistake; whether the architect disregarded his sketches and measurements made under my guidance or whether the various workmen employed could not read his plans we never found out. True the brickwork was 12 inches above the tank but below this and half way over it was a thick concrete lintel, reducing headroom to a fraction of what was required. It was still possible to set up and service the tank, but what that error has meant in beyond tempers, bruised arms, not to mention bad language, over the years cannot be estimated. The lesson to be learnt by this bitter experience is that it is necessary to plan every detail from the start and check them at each stage of the operation, just to make sure

that one's ideas are really practical and are being carried out in accordance with the original plan. With this in mind I have compiled a few general notes that should be borne in mind when contemplating any type of 'purpose-built' aquarium that will do credit to your home and, of course, the hobby.

On the continent our aquarist friends have gone into the question of aquarium decor in the thorough manner with which they have tackled other aspects of the hobby. Their furnished aquaria and the presentation can be truly magnificent. At first glance it might appear that servicing facilities suffer in some cases but I rather suspect that their ingenuity also takes care of this as well. One wonderful example I remember was apparently hanging from the ceiling. Definitely not a job for a 'do it yourself aquarist' unless he were a structural engineer.

So having decided that we need something more than an isolated aquarium stand, whether it be wrought iron, stainless steel, or even some form of abstract art, what are the alternatives? There are about five types to be considered, bearing in mind the circumstances and, of course, most important these days, the question of expense. This latter has to be thought of in relation to one's ability as a 'do it yourself' aquarist cum builder.

To be continued.

'SWORD PLANTS' IN SOUTH AMERICA

Water Plants in the Static Water Regions



A single large specimen of *Echinodorus macrophyllum* found growing in a swampy area near Magé

By **Dr JOACHIM SCHULZE**

Photographs by the author

Translation by F. MARSH

VERY frequently one finds *Echinodorus* species in water conditions quite different from those described in my earlier articles about the places where the new species were discovered. The plants are also found in stagnant waters, often with a very low water level, such as are represented by ditches along the roads, superficial subsidences in the ground, ponds, marshy floodlands and many more. The plants here prefer the emerged way of life, that is they often have only the rhizome and short sections of the lower stalks under the water and the leaves and flower are raised often far above the water surface.

During the driest season, the part of the plant above ground is entirely emerged so that then hardly any difference from land-living plant forms is manifested. On the other hand, in the rainy season the plants become entirely flooded over and for a time live only under water. The length of the periods of emerged and submerged living are controlled by the location and the respective amount of rainfall. As well, in the same area there will be a variation in the height of the plants, as for instance on the slope of a river bank; in this respect quite large differences are produced.

Very often such locations lie in open sunny areas and the greatest possible access of light is not lessened by overhanging trees or bushes. The plants are then exposed all day long to intense sun radiation. Relatively the highest temperatures are reached in the areas of



This is a mass of *Echinodorus* plants of the types forming the group I species complex (described in earlier articles) typified by having large broad oval leaves with the cleft at the base giving the heart-shaped (cordate) leaf



Two *Echinodorus* species of the group I complex growing in static shallow water north west of Porto Alegre. These could not be precisely identified in the forms seen under these growing conditions

stationary shallow water; however, these are confined to the southern limits of the range of distribution. Even in summer water temperatures of 78°F (25-26°C) are seldom exceeded. Under these conditions the plants develop many flowers and propagation through seeding may be widespread. However, hardly any vegetative leaf sprouts will be established on the blossom sprays.

One must not, of course, give a false impression about the richness of nutriment of these waters. In these areas there are often no human settlements and industrial sites for large distances around to contaminate the waters. The supply of nutriment comes mainly out of the soil and through organic waste materials of rotting plants. The ground soil is mostly soft and boggy with much loam and humus as ingredients. True bog conditions with peat nowhere at all, of course. Bogs seem to provide a very unfavourable growth climate, in which it is possible for

only a few plants to thrive. For this reason the practice much employed in aquarium-keeping of using peat as a base medium finds no foundation in Nature.

Several typical localities in which *Echinodorus* species were found are shown in the illustrations. A single example of *Echinodorus macrophyllus* (Kunth) Michx. was found in an extensive swampy area near Magé. In the thick swamp vegetation a small path was cut, so that one could penetrate it in a small boat. In 3 to 6 ft of deep water we found quite isolated on the bottom plants of the same species living fully submerged. The pictured example, however, was growing on a higher location, at least 6 ft. above the then water level, fully dry. The base soil was only moist, not at all muddy or boggy. The plant had, in this emergent form, quite hard, leathery leaves. To accustom plants that have been gathered in such circumstances to the submerged life in the aquarium is often a lengthy business and also does not always succeed.



Polygonum amphibium was found abundantly in the marshy areas of Brazil. This species also grows in Europe



Sagittaria montevidensis was frequently found growing in the same regions as *Echinodorus* species. It is one of the three species of *Sagittaria* now considered to be native to South America

Beautiful broad ribbon-shaped underwater leaves known to aquarists, is to be considered as only a sub-species of *S. montevidensis*. The others of the 20 known species are spread chiefly over North and Central America. We often found *S. montevidensis* together with *Echinodorus* in the same location.

Savannah Lands

In Paraguay one meets extensive dry forest areas, like those in western high-lying Parana, which shelter very few interesting water plants, then also the immense savannah lands of the pampas. In these wide grasslands one finds numerous places with marshy characteristics where the ground has sunk, which, on the other hand, are an eldorado for water and marsh plants. Also present in

the river areas, such as in places along the Paraguay river, are the so-called *Lagunas*, which are connected to the river only during flood periods and otherwise are cut off as stagnant water. Here one finds not only the abundant swamp vegetation but also a great wealth of reptiles, amphibians and fishes.

Unfortunately these areas are enormously difficult to reach and because of that are still hardly explored. The horse is the only means of transport. My companion Mr Thomas Horemán undertook an exploratory ride lasting many hours over Libby's Farm near Vileta south from Asuncion, on which we were allowed through the kind offices of the British consul in Asuncion. Mr Horemán found abundant water and marsh plants in the marshes, but, no further *Echinodorus* species. It would take months to investigate this interesting area thoroughly from the point of view of finding all its aquarists' treasures.



A REPORT received from the chairman, Mr Ron Short, of WOLVERHAMPTON & D.A.S. gives details of the many activities of a thriving and interested membership. Lectures on subjects such as 'Aquarium Literature', 'Breeding Live Foods', 'The Fancy Guppy' have been much appreciated and Sunday trips to aquatic establishments and shows are well supported. (Having won in the decorative aquaria class at the recent M.A.A.S. Convention, the Society were in great hopes of 'being in the cards' at the M.A.P.S. show.) Leading the Society's own table show results so far this year are Mr Reg Crutchley (class A) and Mr Ken Teddall (class B). The juniors take an active part in all club events and are preparing for their own evening's entertainment when they show the adults 'how it's all done'.

Meetings are always helpful and friendly and visitors and new members will be welcomed (8.0 p.m. on the first and third Tuesday of the month at premises over 8 Worcester Street, Wolverhampton—where, Mr Short writes, can also be obtained the best cup of tea in the Midlands, thanks to Mrs Olive Denston and Mrs Josie Short).

BOURNEMOUTH A.C. held their annual open show one sunny Sunday in June. Competitors began arriving as early as 9.0 a.m. and before long visitors from London and places as far afield as Bristol were arriving. Mr Jim Scott-Morgan, president of the Society, made a welcome reappearance after a long illness and took with him several award cards when he left. In addition to fishes, there were snakes, skinks and lizards on display on the stand of a local trader and a display of tropical marines set up by Mr Gerald Jennings. An 'Information Stand' manned by Mr N. Walker proved very valuable.

Judges Mr J. Stillwell, Mr C. A. T. Brown, Mr D. Hancock and Mr H. Towell had 23 classes to judge with nearly 400 entries. The best fish in show award went to the fantail goldfish entered by Mr Vic Collins of Yeovil & D.A.S. Mr Collins also took best coldwater fish in show with the same fish. The best tropical fish in show award went to Mr S. Cook of

Salisbury & D.A.S. for a blue gulari. Other results were:

Guppies, male: 1, Mr J. Hicks (Weymouth, 75); 2, Mr G. T. Devon (Weymouth, 73); 3, Mr T. J. Croucher (Brighton, 74). Guppies, female: 1, Mr C. Beets (Portsmouth, 77); 2 and 3, Mr J. Scott-Morgan (Bournemouth, 75, 73). Swordtails: 1 and 2, Mrs R. Gregory (Bath, 75, 74); 2, Mr H. E. Greenhalgh (Bournemouth, 75). Platy: 1, Mr H. E. Greenhalgh (72); 2 and 3, Mr N. Walker (Bournemouth, 75, 73). Molliis: 1, Mr H. E. Greenhalgh (70); 2 and 3, Mr S. Cook (Salisbury, 75, 77).

Hemigrammus, Hyphalobryon: 1, Mr G. Marks (Portsmouth, 81); 2, Mr E. Sheppard (Hounslow, 79); 3, Mr J. V. Jeffery (Bournemouth, 76). A.O.S. characin: 1, Mr A. Sands (Hounslow, 81); 2, Mr A. G. Cox (Weymouth, 80); 3, Mr S. Cook (Salisbury, 76). Angels: 1, Mr S. J. Ryan (Bournemouth, 75); 2, Mr A. G. Cox (79); 3, Mr W. J. Mansfield (Bournemouth, 74). A.O.S. cichlids: 1, Mr M. Davies (Reading, 80); 2, Mr T. Hamon (Weymouth, 81); 3, Mr R. Willey (Salisbury, 80). Barbs: 1, Mr A. G. Cox (Weymouth, 81); 2, Mr A. Blake (Basingstoke, 80); 3, Mr R. Nelthams (Hounslow, 79). Egg-laying toothcarps: 1, Mr S. Cook (Salisbury, 81); 2, Mr J. Vincent (Southampton, 79); 3, Mr H. Davies (Reading, 77).

Fighters, 1 and 2, Mr A. Blake (Basingstoke, 78, 74); 3, Mr H. S. Pratt (Hounslow, 71). A.O.S. labrynthia: 1, Mr H. S. Pratt (77); 2, Mr D. J. Jones (Southampton, 73); 3, Mr A. Blake (71). Danios, rasboras, minnows: 1, Mr C. Cook (Salisbury, 79); 2, Mr D. J. Jones (Southampton, 78); 3, Mr A. Blake (Basingstoke, 77). Catfish and loach: 1 and 2, Mr G. P. Carter (Weymouth, 78, 74); 2, Mr S. Cook (74). A.O.S. tropical: 1, Mr R. Abbott (Hounslow, 80); 2, Mr H. S. Pratt (80); 3, Mr N. Davies (Reading, 79).

Breeder, egg-layer: 1, Mr S. Forward (Yeovil, 78); 2 and 3, Mr F. P. Carter (Weymouth, 74, 73). Breeder, livebearer: 1, Mr A. Blake (Basingstoke, 79); 2, Mr J. Scott-Morgan (Bournemouth, 78); 3, Miss P. Carr (Brighton, 75).

Crosses and common goldfish: 1 and 2, Mr J. V. Jeffery (Bournemouth, 79, 78); 3, Mr R. J. King (Torbay, 77). Breeder, coldwater: 1, Mr V. Collins (Yeovil, 74); 2 and 3, Mr R. J. King (Torbay, 71, 68). Single-tail: 1 and 2, Mr D. S. Lupton (Yeovil, 76, 76); 3, Mr R. J. King (Torbay, 78). Twin-tail: 1 and 2, Mr V. Collins (Yeovil, 86, 81); 3, Mr R. J. King (Torbay, 79). A.O.S. coldwater: 1 and 2, Mr V. Collins (Yeovil, 82, 79); 3, Mr S. Collard (Bournemouth, 78).

SOUTHEND, LEIGH & D.A.S. were hosts in the first of two inter-club quiz and table shows with BLACKWATER, BILLERICAY & WITHAM Societies. Billericay A.S. won the quiz for which Mr C. J. Skilton of Chelmsford was quiz-master (2, Blackwater; 3, Witham). Awards in the table show, judged by Mr E. Nicoll of Thurrock, were:

Barbs: 1, Mr G. Yallop (81); 2, Mr R. Scott (81); 3, Mr F. P. Cannon (81). Toothcarps: 1 and 2, Mr J. Dewall (81); 3, Mr D. Edwards (81). Male guppy: 1, Mr S. Norris (81); 2, Mr J. Norris (81); 3, Mr C. Allen (81). Characina: 1, Mr T. Clark (81); 2, Mr P. Paris (81); 3, Mr R. Nield (81).

BRACKNELL A.S. are pleased to report that entries for this year's open show were greater than last year and hope this will be an annual phenomenon. The best fish in show award was made to Mr Mac Davies of Reading A.S. who incidentally

won the same award last year with this fish, a *Haplochromis fasciatus*. Results were:

Barbs (class of 12): 1, Mr Grosvener; 2, Mr M. Carter; 3, Mr C. Pike. Characina (21): 1, Mr B. Cooper; 2, Mr J. Pollard; 3, Mrs R. Greenhall. A.O.S. cichlids (17): 1, Mr M. Davies; 2, Mr J. Stillwell; 3, Mr A. Peppert. Angels (8): 1, Mr J. Fenra; 2, Mr Flander; 3, Mrs J. Roberts. Dwarf cichlids (6): 1, Mr Grosvener; 2, Mr A. Blake; 3, Mr J. Pollard. Labrynthia (21): 1, Mr A. Blake; 2, Mrs R. Greenhall; 3, Mr Wood. Egg-layer toothcarps (5): 1 and 2, Mr Tarrant; 3, Mr H. Gough.

A.O.S. catfish (12): 1, Mr D. Eaton; 2, Mr T. Summers; 3, Mr G. Smith. Corydoras, Brochis (14): 1, Mr J. Norris; 2, Mr T. Summers; 3, Master F. Berryman. Rasboras (21): 1, Mr J. Pollard; 2, Mr B. Crooks; 3, Mr P. Merritt. Danio, minnow (5): 1, Mr A. Blake; 2, Mr M. Carter; 3, Mrs R. Greenhall. Loach (14): 1, Mr L. Little; 2, Mr M. Carter; 3, Mr L. Jordan. A.O.S. egg-layer (17): 1, Mr J. Petros; 2, Mr A. Blake; 3, Mr R. Thomas.

Male guppy (6): 1, Mr P. Merritt; 2, Mr T. Duffy; 3, Mr A. Keith. Female guppy (8): 1, Mrs R. Greenhall; 2, Mr T. Duffy; 3, Mr A. Blake. Swordtails (4): 1, Mr M. Carter; 2, Mr S. Larder; 3, Master Tom Berryman. Platy (10): 1, Mr C. Pike; 2, Mr L. Little; 3, Mr M. Davies. Molliis (8): 1, Mr J. Stillwell; 2, Mr D. Wall; 3, Mr H. Gough. A.O.S. livebearer (14): 1, Mr Cooper; 2, Mr A. Blake; 3, Mr G. Greenhall. Breeder, egg-layer (7): 1, Mr R. Cox; 2, Mr Grosvener; 3, Mr Tarrant. Breeder, livebearer (10): 1, Mr L. Little; 2, Mr R. Cox; 3, Mr H. Woods. Scapable pairs (10): 1, Mr J. Pollard; 2, Mr A. Blake; 3, Mr R. Thomas.

Single tail goldfish (10): 1, Mr R. Dudley; 2, Mr J. Keneply; 3, Mr D. Riddley. A.O.S. coldwater (8): 1, Mr R. Dudley; 2, Mr J. Stillwell; 3, Master M. Roddley. Twin-tail goldfish (7): 1, Mr R. Dudley; 2, Mr A. Marshall; 3, Mr L. Jordan. Rood plants (15): 1 and 2, Mr G. Greenhall; 3, Mr B. Coombes. Cupping plants (2): 1, Mr T. Duffy; 2, Mr G. Greenhall; 3, Mr M. Carter. Mini-aquaria (4): 1, Mr T. Duffy; 2, Mr Len Jordan; 3, Mr J. Taylor.

HOUNSLOW & D.A.S. are enjoying a very active season; a large number of excellent lectures have been heard in recent months and social events arranged regularly. A coach trip to the Bournemouth A.C. open show was a great success and members had a most enjoyable day at the show and on the beach. The Society's own open show on 20th September is being carefully planned to achieve a well-organised event. The show schedule this year is the first to be drafted to F.B.A.S. specifications, and with this it is hoped to achieve standard classification of classes at all open shows. Recent club table show results have been:

Corydoras catfish: 1, Mr C. Bunce; 2, Mr J. Bannon; 3, Mr B. A. Brook. A.O.S.: 1, Mr B. Abbot (Ras. albon); 2, Mr C. Bunce (J. Borealis); 3, Mr R. Abbott (E. alpinus). Labrynthia: 1 and 2, Mrs R. Brewer (Dancing gourami, snakekin gourami); 3, Mr M. Best (Blue gourami). Barbs: 1 and 2, Mr R. Bush (Irony barbs); 3, Mr R. Nelthams (Chequer barbs). A.O.S. catfish: 1, Mr J. Robinson (S. nigricornis); 2, Mr B. Callow (Dahis loach); 3, Mr R. Buckwell (Microgrammis species). Livebearer: 1, Mr M. Haver (Liberty rosb); 2, Mr R. Abbott (Lemon striata); 3, Mr B. Callow (speckled rosb).

ENTRIES were received from more than 34 societies at the **BARNLEY T.F.S.** open show. From over 500 entries, Mr B. Phillips from Ashton-under-Lyne won the best fish in show award. Results were:

Guppies: 1, 2, and 3, Mr W. J. Orton (Salford, 75, 76, 77). Plaies: 1, Mr J. A. Whyteley (Aireborough, 77); 2, Mr D. Truce (Luton, 74); 3, Mr A. G. Eaves (Top Ten, 75). Swordtails: 1, Mr N. R. Gibson (Huddersfield, 77); 2, Mr L. Kaye (Top Ten, 74); 3, Mr M. Jones (Valley, 76). Mollies: 1, Mr J. Murrey (section winner, Salford, 75); 2, Mr and Mrs J. Brown (Mitsenden, 75); 3, Mr R. Pickles (Keighley, 74).

Small characins: 1, Mr M. Jones (Valley, 76); 2, Mr F. Buxton (Barnley, 74); 3, Mr R. Walker (Sheffield, 77). A.O.V. characins: 1, Mr B. Phillips (section winner, Ashton, 80); 2, Mr J. A. Whyteley (Aireborough, 80); 3, Mr N. Turner (Mitsenden, 76). Dwarf cichlids: 1, Mr N. R. Gibson (Huddersfield, 81); 2, Mr R. Walker (Sheffield, 80); 3, Mr L. Kaye (Top Ten, 78). A.O.V. cichlids: 1, Mr D. Kennedy (section winner, Bradford, 84); 2, Mr Taylor (Aireborough, 80); 3, Mr F. Booth (Wakefield, 80). Barbies: 1, Mr F. Buxton (section winner, Barnley, 80); 2, Mr J. A. Whyteley (Aireborough, 80); 3, Mr F. J. Gregory (Ossau, 79). A.O.V. barbs: 1, Mr J. A. Whyteley (Aireborough, 80); 2, Mr M. Jones (Valley, 76); 3, Mr and Mrs J. Brown (Mitsenden, 74).

Catfish and loaches: 1, Mr Haldworth (Preston, 81); 2, Mr Rhodes (York, 81); 3, Mr D. Kennedy (Bradford, 80). Siamese kittens: 1, Mr Anson (Stockbridge, 76); 2, C. & M. Raybold (Rotherham, 77); 3, Mr Asquith (Castleford, 74). Anabantids: 1, Mr W. J. Orton (Salford, 81); 2, Mr L. Kaye (Top Ten, 78); 3, Mr A. B. White (Keighley, 76). Danios, rasboras, minnows: 1, Mr Ormscher (Southport, 81); 2, Mr A. Simpson (Barnley, 79); 3, Mr Asquith (Castleford, 75). Egg-laying toothcarps: 1, Mr D. Jackson (Dickering, 76); 2, Mr Gentry (Sunnybrow, 75); 3, Mr and Mrs J. Brown (Mitsenden, 74).

Breeders, livebearers: 1, Mr W. J. Orton (Salford, 78); 2, Mr G. Monk (Aireborough, 76); 3, Mr R. Hesley (Barnley, 74). **Breeders, egg-layers:** 1, Mr R. Walker (Sheffield, 81); 2, Mr R. Hesley (Barnley, 76); 3, Mr F. Buxton (Barnley, 77). **A.O.V. tropical:** 1, Mr D. Kennedy (Bradford, 80); 2, M. J. & S. Allison (York, 76); 3, Mr R. Pickles (Keighley, 76). **Livebearers, pairs:** 1, Mr W. J. Orton (section winner, Salford, 75); 2, Mr G. Thaksham (Castleford, 75); 3, Mr and Mrs Bone (Huddersfield, 74). **Egg-layers, pairs:** 1, Mr Gentry (Sunnybrow, 77); 2, Mr Reynolds (Swillington, 76); 3, Mr N. R. Gibson (Huddersfield, 77). **Sharks and flying fishes:** 1, Mr R. Walker (Sheffield, 80); 2, Mr N. R. Gibson (Huddersfield, 77); 3, Mr and Mrs J. Brown (Mitsenden, 74). **Coldwater:** 1, Mr J. Hooper (Valley, 78); 2 and 3, Mr Eason (Sheffield, 76, 74).

NORWICH & D. A.S. have recently had to look for larger premises because of ever-increasing membership. The Society now meet on the first Thursday in the month, at 8.0 p.m., at the Co-op Hall, Earlham Green Lane, Earlham, Norwich. The new venue also carries full use of a kitchen so light refreshments are available. There is still plenty of room for new members, who will be very welcome. The Society has been fortunate in securing as its president Mr Philip Wayne, director of the Norfolk Wildlife Park and well known from T.V. appearances and his award-winning film 'Wind

ON the 13th September at Sutton Adult School, Benhill Road, Sutton, Surrey, **SOUTH PARK AQUATIC (STUDY) SOCIETY** are holding a coldwater fish and amphibian show—their first and also, they believe, the first solely coldwater show to be held by a society apart from the G.S.G.B. Captain L. C. Betts, president of the G.S.G.B., will lecture on 'The Goldfish'.

on the Heath'. The 'Philip Wayne Annual Trophy' is being presented each year to the member gaining most points in the monthly table shows, and will be presented this year at the Society's first dinner and dance on 5th December. Please contact secretary Mr P. Groves (35 Folly Road, Wymondham, Norfolk) for details.

JUDGES Mr B. Pengilly and Mr J. Loder awarded the best in show at the **WARRINGTON A.S.** open show to Mr R. Dutton of Chester for his entry in the pairs, tropical egg-layers class. Results were the following.

Guppies: 1 and 2, Mr P. J. Duffy (Manchester, 80, 79); 3, Mr and Mrs E. Wells (Sunnybrow, 78). **Mollies:** 1, Mr R. Bewick (Warrington, 78); 2, Mr D. Slater (Sunnybrow, 77); 3, Mr and Mrs Grimshaw (Sunnybrow, 76). **Swordtails:** 1, Mr F. Lodge (Top Ten, 78); 2, J. & R. Standen (Loyne, 77); 3, Mr C. Hoggarth (Salford, 75). **Plaies:** 1, Mr and Mrs Webb (Salford, 77); 2, Mr L. Kaye (Top Ten, 78); 3, Mr L. Crawford (Warrington, 76). **A.O.V.:** 1, Mr L. Kaye (Top Ten, 78); 2, Mr A. Middleton (Sunnybrow, 78).

Characins, under 2 in.: 1, Mr F. Gregory (Ossau, 79); 2, Mr J. Gentry (Sunnybrow, 78); 3, Mr R. Dutton (Chester, 77). **Characins over 2 in.:** 1, Mr J. Gentry (Sunnybrow, 80); 2, Mr D. Hesley (Warrington, 79); 3, Mr M. Baker (Warrington, 78). **Barbs up to 2 1/2 in.:** 1, Mr F. Gregory (Ossau, 80); 2, Mr Witherham (Ossau, 79); 3, Mr L. Kaye (Top Ten, 78). **Barbs over 2 1/2 in.:** 1, D. & R. Standen (Loyne, 77); 2, Mr R. Haslam (Loyne, 75); 3, Mr Showlton (Warrington, 74). **Cichlids, single:** 1, Mr R. Philcox (78); 2, Mr Showlton (Warrington, 76); 3, D. & R. Standen (Loyne, 75). **Dwarf cichlids:** 1, Miss R. Kaye (Huddersfield, 78); 2, Mr P. Booth (Wakefield, 77); 3, Mr L. Kaye (Top Ten, 78). **Large cichlids:** 1, Mr R. Dutton (Chester, 81); 2, Mr P. Booth (79); 3, D. & R. Standen (78). **Anabantids, single:** 1, Mr A. E. Addison (Warrington, 77); 2, Mr C. Asquith (Castleford, 75); 3, Mr J. Roberts (Nelson, 74). **A.O.V.:** 1, Mr G. Eaves (Top Ten, 76); 2, Mr F. Booth (Wakefield, 78); 3, Mr and Mrs Bone (Huddersfield, 77).

Catfish etc.: 1, T. W. (Sunnybrow, 81); 2, D. & R. Standen (Loyne, 74); 3, T. W. (Sunnybrow, 78). **Loaches:** 1, Mr Witherham (Ossau, 79); 2, Mr and Mrs Webb (Salford, 78); 3, D. & R. Standen (Loyne, 77). **Labour, flying fishes, sharks:** 1, Mr B. Bewick (Warrington, 80); 2, Mr M. Baker (Warrington, 76); 3, Mr Whitney (Warrington, 77). **Toothcarps:** 1 and 2, Mr J. Gentry (Sunnybrow, 78, 76); 3, Mr J. Roberts (Nelson, 77). **Minnows, etc.:** 1, Mr R. Bewick (Warrington, 79); 2, Mr and Mrs Webb (Salford, 78); 3, Mr F. Gregory (Ossau, 77). **A.O.V. tropical:** 1,

Mr R. Dutton (Chester, 80); 2, D. & R. Standen (Loyne, 79); 3, Mr J. Gentry (Sunnybrow, 78).

Breeders, egg-layers: 1 and 2, Mr R. Dutton (Chester, 81, 80); 3, Mr F. Gregory (Ossau, 81). **Breeders, livebearers:** 1, Mr J. Higham (Warrington, 78); 2 and 3, Mr P. J. Duffy (Manchester, 77, 76). **Pairs tropical egg-layers:** 1, Mr R. Dutton (Chester, 81); 2, Mr and Mrs Grimshaw (Sunnybrow, 81); 3, Mr J. Murray (Salford, 76). **Livebearers:** 1, Mr J. Gentry (Sunnybrow, 81); 2, Mr and Mrs Bone (Huddersfield, 80); 3, Mr and Mrs Hoggarth (Salford, 78). **Coldwater, common goldfish:** 1 and 2, Mr Eason (Sheffield, 75, 74); 3, Master A. Kaye (Huddersfield, 76). **Fancy goldfish:** 1, Mrs Cunley (Northwich, 80); 2, Mr Eason (Sheffield, 76); 3, Mr Walsh (Accrington, 78). **A.O.V. coldwater:** 1 and 2, Mr Eason (Sheffield, 75, 74); 3, Mr Whitney (Accrington, 77). **Janitor:** 1, Master A. Kaye (Huddersfield, 78); 2, P. J. Duffy, jr. (Manchester, 77); 3, Master M. Palin (Northwich, 74).

THE PRESS OFFICER of EALING & D.A.S. reports that the club's competition for long-term quality fishkeeping, for which the Irvine trophy is presented, has reached the halfway stage. After a large initial entry in round one, the entries for the next round dropped by half—members are still debating whether this is due to sudden, mysterious fish deaths or just wholesale surrender by new entrants to the faithful few! The club's preparations for their first open show on 14th September are complete. Now all depends on entries and good weather, as outside entertainments are being planned for non-fish-minded wives and children.

Members have recently enjoyed a most interesting lecture by Mr Colling of the Metropolitan Water Board, whom they recommend highly to interested societies. Water chemistry and filtration were discussed in detail; and the interest was on both sides as Mr Colling felt he had also learnt much from club members that evening.

FORMED in 1951, **HIGH WYCOMBE A.S.** staged their first annual open show independent of any other event this year, and it was an outstanding success. There were nearly 600 exhibits and over 700 people turned up, in pouring rain, to view the fish. The chairman of the F.B.A.S. presented the engraved trophy for best fish in the show to Mr P. Arnould of Hackney for his entry of a *Botia loachata*. The Turner trophy for the High Wycombe member with the highest points was awarded to Mrs Ann Seed, and the Anne Seed Rosebowl for the best goldfish in the show went to Mr A. W. Smith. Mr S. G. Tarrant won the '67 Committee' trophy for first breeders egg-layers and Mr L. G. Little the '68 trophy' for first breeders livebearers; Mr R. Dudley of Wimbledon became the first holder of the '69 Bovingdon'

trophy with his entry of globe eyes in the breeders coldwater class. The best characin, owned by Mr R. S. C. Wingrove, won him the Chatfield trophy. Detailed results were:

Tropical fish. A.v. platy: 1, Mr C. Beavis; 2, Mr L. Little; 3, Mr T. Errey. A.v. swordtails: 1, Mr P. Abbott; 2, Mr R.

Wingrove; 3, Mr J. Healey. A.o.v. livebearer (ex. guppies): 1, Mr R. Cooper; 2, Mr M. Carter; 3, Mr T. Summers. *Hemigrammus*, *Hyphessobrycon*, *Chirodon*: 1, Mr R. Wingrove; 2, Mr J. Gower; 3, Mr C. Pike. A.o.v. characin: 1, Mr R. Cooper; 2, Mr H. Wood; 3, Mrs D. Cruikshank. Danio, rasbora, minnow: 1, Mr J. Gower; 2, Mr M. Carter; 3, Mr B. Funnell. Barbs: 1, Mr P. Grosvenor; 2, Mr M. Carter; 3, Mr

J. Healey. *Corydoras*: 1, Mr D. Larder (and F.B.A.S. plaque); 2, Mr J. Norris; 3, Mr T. Summers. A.o.v. catfish and loaches: 1, Mr P. Arnold; 2, Mr C. Pike; 3, Mr M. Carter.

Cichlids: 1, Mr and Mrs Stilwell; 2, Mr L. Jordan; 3, Mr B. Field. A.o.v. egglayer: 1, Mr S. Tarrant; 2, Mr A. Blake; 3, Mr C. Walford. A.o.v. labyrinth: 1, Mr J. Bird; 2, Mr A. Wynd; 3, Mr T. Collard. Breeders livebearers: 1, Mr L. Little; 2 and 3, Mr H. Wood. Breeders egglayers: 1, Mr S. Tarrant; 2, P. Grosvenor; 3, Mr R. Cox. Pair of breeding fish: 1, Mr S. Tarrant; 2, Mr C. Beavis; 3, Mr C. Pike.

Guppies. Best male: Mr F. Hall. Best female: Mr G. Wheeler. Best breeders, Mr G. Wheeler.

Coldwater fish. Singletails: 1, 2 and 3, Mr K. Speak. Twintails: 1, 2, and 3, Mr A. Smiths. Globe eyes, brambleheads, pearlscales, celestials, pom-poms and bubble-eyes: Mr J. Leaver; 2, Mr R. Dudley; 3, Mrs A. Seed. Common goldfish and comet tails: 1, 2 and 3, Mr V. Voysey. Broadtailed moor, oranda, fantail: 1, 2, Mrs A. Seed; 3, Mr A. Smith. Breeders coldwater: 1, 2 and 3, Mr R. Dudley. A.o.v. coldwater: 1, Mr and Mrs A. Stilwell; 2, Mr R. Dudley; 3, Mr H. Thomson.

Club furnished aquaria: 1, 2, High Wycombe; 3, Ealing. Individual furnished: 1, Mrs S. Thomas; 2, Mr D. Schramm; 3, Mrs O. Wilkinson.

JUDGES Mr Jessopp, Mr Tomkins, Mr Towell and Mr Brown had over 400 entries from 24 clubs to judge in the **UXBRIDGE & D. A.S.** open show. Whilst the judging took place, Miss M. Green, secretary of the British Herpetological Society, gave a most entertaining lecture. Hillingdon Carnival Queen, Miss P. Brandon, presented prizes to the following principal prize-winners:

Individual furnished aquaria, Mr R. Forder. Uxbridge. Club furnished aquaria, Tottenham A.S. A.v. tropical plant, Mr G. Greenhalf, Kingston. A.v. goldfish, Mr Voysey, Salisbury. A.o.v. coldwater fish, Mr H. Thomson, Uxbridge. Guppy, Mr M. Bradford, Hampstead. Molly, Mr B. E. Mason, Independent. Platy, Mr L. G. Little, Bracknell. Swords, Mr J. Stephens, N. Kent. Characins, Mr R. Smith, Tottenham. Labyrinth, Mr F. Kendrick, Free-lance.

A.v. *Corydoras*, Mr R. Cox, High Wycombe. A.o.v. catfish, Mr B. E. Mason, Independent. Cichlids, Mr B. J. Pawley, Kingston. Dwarf cichlids, Mr P. A. Grosvenor, Runnymede. Danios, rasboras, minnows, Mr P. A. Grosvenor, Runnymede. Barbs, Mr P. A. Grosvenor. Egglayer toothcarps, Mr S. E. Tarrant, Hendon. A.o.v. tropical livebearer, Mr I. Lamb, Basingstoke. A.o.v. tropical egglayer, Mr L. G. Little, Bracknell. Breeders egglayers, Mr P. A. Grosvenor, Runnymede. Breeders livebearer, Mr L. G. Little. Special class, a.v. two pairs of tropical fish, Mr Beavis, High Wycombe.

The best fish in the show trophy, a rose bowl, and the Pete Ginger annual barb cup, went to Mr P. A. Grosvenor for his schuberti barb. The Committee Cup was won by Mr Beavis in the special class for a pair of *Platy varietus* and *C. severum*. The Ken Parry Cup for best fish over 9 in. long went to Mr B. E. Mason for a *Loricaria parva*. The inter-club trophy was won by the host club with 14 points (Runnymede, 12 points, a notable single-handed effort by Mr P. Grosvenor).

Swillington A.S. Show Results



Members of the Alfreton A.S. show team with the Duralife cup awarded to them as the society gaining most points at the Swillington Show

ONCE again **SWILLINGTON A.S.** chose a day of exceptionally warm and sunny weather for their annual open show (their fourth) and many exhibitors were able to sunbathe in the gardens of the school where the show was held. Entries had increased again, this year by more than 100, giving a total of 566, and members of 30 aquarist societies visited the show as well as many local non-fishkeepers. Mr Kennedy of Bradford won the best fish in the show award. Alfreton A.S. won the Duralife Cup for the society gaining most points (2, Aireborough 15; 3, Sheffield 14).

Guppies: 1, Mr Thickboom (section winner); 2 and 3, Mr Duffy. Mollies: 1, Mr and Mrs Burnap; 2, Mr Allison; 3, Mr W. Payer. Platys: 1, Mr Douglas; 2, Mr J. A. Whiteley; 3, Mr Dermie. Swordtails: 1 and 2, Mr Douglas; 3, Mr Fledger. A.o.v. livebearer: 1, Mr G. Inks (section winner); 2 and 3, Mr L. Kaye. Characins, small: 1, Mr Walker; 2, Mr R. Wilkinson; 3, Mr and Mrs Buckston. Characins, large: 1, Mr Reynolds (section winner); 2, Mr N. Turner; 3, Mr G. Monk. Barbs, small: 1, Mr and

Mrs F. Buckston (section winners); 2, Mrs I. Bullement; 3, Mr W. Payer. Barbs, large: 1, Mr M. Woodley; 2, Mr M. J. Allison; 3, D. & R. Standen.

Sharks and foxes: 1, Mr J. Blamires (section winner); 2, Mr Walker; 3, D. & R. Standen. Rasboras, danios and minnows: 1, Miss S. Gerrard (section winner); 2, Mr R. Wilkinson; 3, Mr Purvis. *Corydoras*: 1, Mr Walker; 2, Mr P. Booth; 3, Mr R. Stringer. A.o.v. cats and loaches: 1, Mr and Mrs Webb (section winners); 2, Mr F. Gates; 3, Mr P. Reynolds. Toothcarps: 1, Mr D. Wragge (section winner); 2, Mrs I. Bullement; 3, D. & R. Standen. Fighters: 1, Mr M. Woodley (section winner); 2, Mr A. E. Whitlock; 3, Mr Asquith. Anabantids: 1, Mr Wilberham (section winner); 2, Mr Megson; 3, Mr Woodley. Dwarf cichlids: 1, Mr D. Jackson; 2, Mr S. Brook; 3, Mr L. Kaye. Large cichlids: 1, Mr Kennedy (section winner); 2, Mr and Mrs Helm; 3, Mr K. Binns. A.o.v. tropical: 1, Mr Kennedy (section winner); 2, Mr M. J. Allison; 3, Mr Dermie.

Pairs livebearers: 1, Mr Duffy (section winner); 2, Mr W. J. Horton; 3, Mr H. Gardener. Pairs egglayers: 1, Mr and Mrs Helm (section winners); 2, D. & R. Standen; 3, Mr and Mrs Cohen. Breeders livebearers, 1, Mr G. Monk (section winner); 2, Mr Duffy; 3, Mr H. Gardener. Breeders egglayers: 1, Mr and Mrs Buckston (section winners); 2, Mr D. Wragge; 3, Mrs S. Batty. Coldwater: 1, 2 and 3, Mr Hadon (section winner). Furnished jars: 1, Mr Dammann (section winner); 2, Mr Skirrow.

A GOOD attendance by the general public made up in some degree for the disappointment felt by LEAMINGTON & D.A.S. at the lack of vigorous support given to their open show by local societies. Of the 16 or so clubs expected to attend, only nine benched fish. Even so, M.A.A.S. judges Mr F. Pearson, Mrs J. Pearson, Mr R. Deacon, Mr R. Tedds, Mr C. Scidmore and Mr D. Emery had some 250 fish to study. The best fish in the show gained 88 points, and was a botia entered by Mr A. Gregory of Haden Select. Class winners were:

Brooders, egglayers: Mr L. W. Ball (Atherstone, penguin). Breeders, livebearer: Mr and Mrs Debra (velifera mollie). Barbs under 3 in.: Mr Edkins and Mr Pagett (Nuneaton, rosy barb). Barbs over 3 in.: Mr L. C. Wilks (Haden Select), R. homotrich, Dwarf cichlid: Mr Ashby (Bedworth), A. ramorensis, Large cichlid: Mr R. J. Hoagh (N. Works, marble cichlid), A.V. anabantid: Mr D. Emery (Haden Select, Siamese fighter).

Guppies: Mr A. Whitmore (Bagby, delta tail, Killifish); Mr R. Shakespeare (Bedworth, P. playfairi). Platys: Mr and Mrs Cox (Nuneaton, sunset platys). Pairs egg-layer: Mr A. J. Hayes (Dassing gourami), Pairs livebearers: Mr Edkins and Mr Pagett (Nuneaton, Cuban limia), A.O.S. livebearer: Mr L. W. Ball (Atherstone, velifera mollie), Homogrammus and Hyporhamphus: Mr B. C. Roberts (Gosport), A.O.V. characin: Mr A. Gregory (Haden Select, A. anostomus), Rasbora, danio, minnow: Mr and Mrs Debra (brilliant rasbora).

Corydoras: Mr R. Shakespeare (Bedworth, C. neri), A.O.S. catfish and loach: Mr A. Gregory (Haden Select, loach), A.O.V. tropical, Mr and Mrs Highfield (Wednesbury, five eels), Common goldfish, Mr A. Emery (Haden Select), Fancy goldfish, Mr E. Clarke (Leamington, moor), A.O.S. coldwater: Mr Tedds (Bedworth, golden orfe).

THE size of the entry at the BRISTOL T.F.C. open show was such that quite an amount of last-minute buying of extra aquaria took place. However, in spite of this it was with extreme regret that some late entries had to be declined. The best fish in the show went to the velifera mollie entered by Mrs C. Little. Class winners were:

Siamese fighters, Mr F. Brown, Labyrinthia, Mrs M. Gadd, Barbs, Mr F. Brown, Homogrammus and Hyporhamphus, Mr D. Noble, A.O.V. characin, Mr T. Green, Anguill, Mr M. Taylor, Dwarf cichlid, Mr H. Masliah, A.O.V. cichlid, Mr R. Watts, Corydoras, Mr F. Brown, A.O.V. catfish, Mr T. Green, A.V. danio, Mr G. Farber, Sharks and loaches, Mr J. May, A.O.S. tropical fish, Mr J. Smith.

Swordtails, Mr D. Plack, Mollies, Mrs C. Little, Platys, Mr G. Farber, Brooders egglayers, Mr H. Masliah, Breeders livebearers, Mr M. Taylor, Guppies, long tail, Mr J. Wheeler, Guppies, short tail, Mr M. Taylor, Guppies, female, Mr J. Wheeler, A.V. sexed pairs, Mr B. Eastshaw, A.V. egglayers, junior, Mr J. Hoon, A.V. livebearers, junior, Mr P. Feldt, Individual furnished aquaria, Mr L. Littleton.

WINNER of the Thorne trophy for the best fish in the show at the NORTHWICH & D.A.S. first open show was the severum cichlid entered by Mr R. Dutton of Chester

HUCKNALL & BULWELL A.S. have a new slide/tape show for hire to societies. This year, as their home-tank aquariums were being judged for their annual competition, a film was taken of the tanks and a descriptive commentary recorded. Interviews with the tank owners are also featured. Interested societies please contact chairman Mr T. H. Power, 27 Wings Drive, Westville, Hucknall, Nottingham.

A.S. Mr B. Bewick of Warrington A.S. won the Russell-Allen trophy for the best livebearer other than best fish in the show, The Hyland trophy for the best fish, other than best in the show, entered by a Northwich member and the Bony trophy for the Northwich member gaining the most awards was won by Mr Robert Antonio. With 78 points, Northwich won the Inter-Pet trophy for the society gaining the most points overall. Class winners were:

Guppies, Mr and Mrs Webb (Salford A.S.), Swordtails, Mr C. Davies (Northwich), Mollies, Mr B. Bewick (section winner, Warrington), Platys, Mr and Mrs Webb (Salford), Barbs up to 3 in., Mr Tilton (Chester), Barbs over 3 in., Mr R. Antonio (section winner, Northwich), Characins over 3 in., Mr R. Adenson (section winner).

Fighters, C. & M. Raybould (section winners, Rotherham), A.O.V. anabantid, Mr B. Bewick (Warrington), Dwarf cichlid, Mr R. Dutton (section winner, Chester), Anguill, Mr J. Ashbrook (Northwich), Carps and minnows, Mr M. Palm (Northwich), Danios and rasboras, Mr L. Thorne (Northwich), Sharks and flying foxes, Mr Bewick (section winner, Warrington).

Small catfish, Mr M. Summers (Northwich), Large catfish, Mr R. Antonio (section winner, Northwich), Loaches, Mr and Mrs Webb (Salford), A.O.V. tropical, Mr and Mrs Webb (section winners, Salford), Pairs livebearers, Mr and Mrs Hogarth (Salford), Pairs egglayers, Mr R. Dutton (section winner, Chester), Breeders livebearers, Mr and Mrs Hogarth (Salford), Breeders egglayers, Mr R. Dutton (section winner, Chester).

Common goldfish, Master A. Kaye (Huddersfield), Fancy goldfish, Mrs S. Cooley (section winner, Northwich), A.O.S. coldwater, Master A. Kaye (Huddersfield), Junior section, Master A. Kaye (section winner, Huddersfield).

HARLECH A.S. believe that their efforts to attract first-class speakers to lecture at their monthly meetings were amply rewarded in July when Dr Neville Carrington, Managing Director of the Inter-Pet Co. lectured on 'Modern Techniques in Fishkeeping', Secretary Mr M. J. Parry tells us that Dr Carrington, even during the lengthy refreshment break, was surrounded by enthusiastic members who were anxious to obtain his authoritative views on all aspects of the aquatic hobby.

The Society meets on the third Tuesday of each month at Gabalfa Junior School, Colwill Road, Cardiff and amongst forthcoming speakers are Mr R. McN. Alexander (Professor of Zoology, University of Leeds), Mr Barry James of Cheltenham Aquatics, and Mr S. P. Dance (Assistant Keeper of Zoology, National Museum of Wales). All details from Mr Parry (57 Caerou Court Road, Cardiff).

A TINFOIL barb was the winner of the best fish in the show award at NUNEATON A.S. second open show, entered by Mr Haynes of Derby. There were 340 entries and the prize for winning most awards went to Mr and Mrs G. Cox of Nuneaton. Class winners were:

Anabantid, Mr P. Bunting (Nuneaton), Fighters, Mr Fellows (M.A.P.S.), Characins over 3 in., Mr Edkins and Mr Pagett (Nuneaton), Characins under 3 in., Mr Edkins and Mr Pagett, Anguill, Mr Trappes (N. Works), Dwarf cichlid, Mr Kaye (Top Ten), A.O.V. cichlid, Mr Hoagh (Barbs over 3 in., Mr Haynes (Derby), Barbs under 3 in., Mr Kaye (Top Ten), Catfish, Mr Shakespeare, Loaches, Mr R. Scully (Bedworth).

Male guppies, Mr R. Shakespeare, Female guppies, Mr Edkins and Mr Pagett, Platys, Mr Young (M.A.P.S.), Mollies, Mr L. Ball (Atherstone), Swordtails, Mr L. Ball, A.O.V. livebearers, Mr Kaye (Top Ten).

Brooders, egglayers, Mr L. Ball (Atherstone), Breeders, livebearers, Mr Tippins (N. Works), Egglayers pairs, Mrs S. Leigh, Pairs livebearers, Master Glover (Bedworth), Killies, Mr Trotman (Atherstone), A.O.S. tropical, Mr S. Bingham (Nuneaton), Coldwater, common goldfish, Mr Gibbs (Bedworth), Fancy goldfish, Mrs Leigh, A.O.S. coldwater, Mrs Haines (Nuneaton), Plants, Mr and Mrs G. Cox (Nuneaton).

AN EXHIBITION of amphibians and reptiles was an added attraction at the GOSPORT & D.A.S. third open show. Judges Mr J. Stillwell, Mr R. Matley and Mr W. Ryder awarded the best fish in the show award to the Texas cichlid entered by Mr J. Perman. Class winners were:

Male guppy, Mr Elick (Gosport), Female guppy, Mr Cook (Salisbury), Platys, Mr Little (Bracknell, best livebearer), Swordtail, Mr Gregory (Bath), Mollies, Mr Cook (Salisbury), Characins, Mr Blake (Basingstoke), Dwarf cichlid, Mr Jones (Southampton), A.O.S. cichlid, Mr Perman (Gosport, best fish in the show, best cichlid), Barbs, Mr Blake (Basingstoke, best barb), Siamese fighters, Mr Wynd (Farnborough, best labyrinth), A.O.S. labyrinth, Mr Blake (Basingstoke), Danio, minnow, rasbora: Mr Cook (Salisbury), Corydoras catfish, Mr Perman (Gosport), A.O.S. catfish, Mr Perman (Gosport, best catfish), Loach or botia, Mr Little (Bracknell), A.O.S. tropical, Mr Blake (Basingstoke), Breeders egglayers: Mr Cox (High Wycombe, Corsey Cup), Breeders livebearer, Mr Little (Bracknell, Wington Cup).

A.O.S. goldfish, Mr Voysey (F.B.A.S. trophy, best coldwater fish), A.O.V. cristat, Mr Collins (Yovil, best trinitail), A.O.V. shubunkin, Mr Elick (Gosport), A.O.S. coldwater, Mr Voysey, Furnished aquaria: tropical (club), Gosport; tropical (individual), Mr Gregory of Bath; coldwater (club), Gosport.

WHEN Mr Ted Gallagher lectured on live foods to visitors to the BIRMINGHAM SECTION of the FANCY GUPPY ASSOCIATION at the Glebe Farm Community Centre, Glebe Farm Road, Birmingham, we are reliably informed that 'he arrived with numerous jars, pots and pans from which he produced all types of bugs, leeches, toads, tadpoles—you name it, he had it'—much to the delight of the listeners. Winners of the classes at the show for which there were 176 entries were:

Neon (2 entries), Mr G. S. Beucham (71 points). Roundtail male (4), Mr G. S. Beucham (74). Cofertail (8), Mr C. W. Davies (74). Spartail (1), Mr R. Grove (71). Pintail (16), Mr S. Croft (64). Boston sword (11), Mr G. Fletcher (72). Double sword (11), Mr M. H. Dolingpole (72). Lyretail (3), Mr P. W. Jinks (56). Scarftail (1), Mr J. Wiza (56). Original veil (1), Mr R. Grove (67). Long dorsal veil (14), Mr M. H. Dolingpole (58). Short dorsal veil (20), Mr C. W. Davies (72). Delta (11), Mr J. A. Davies (74). Fantail (20), Mr M. H. Dolingpole (74). Male colour class (26), Mr G. S. Beucham (73). Roundtail female (4), Mr R. Grove (74). Superba (7), Mr K. Edkins (77). Metro-politan (5), Mr and Mrs Phillimore (74). Scallop (2), Mr and Mrs Phillimore (72). Wadgetail (6), Mr R. Grove (58). Colour female (4), Mr G. S. Beucham (73). Breeders males (4), Mr C. W. Davies (72). Breeders females (2), Mr and Mrs Phillimore (73). Breeders matched pairs (14), Mr and Mrs Phillimore (75). Master breeders (3), Mr and Mrs Phillimore (75).

The best in show award was made to Mr R. Grove for his roundtail entry, the best opposite sex to Mr S. Croft for a pintail and best breeders award to Mr and Mrs Phillimore.

THE BRIGHTON & SOUTHERN A.S. open show was a highly successful venture, attracting visitors from a wide area, both fish enthusiasts and members of the general public. Over 500 fish were benched, including 118 very impressive guppies benched on the F.G.A. stand. An exhibit set up by the International Marine Study Society attracted much interest with its popular clown fishes and domino damselfish. Class winners at the show were:

Furnished aquaria, Mr E. R. Nicol, 76 points. Barbis, Mr C. West (shell-banded, 81). Characins, Mr P. C. Waring (blind cave fish, 81). Cichlids, Mr J. Bellingham (convict, 80). Dwarf cichlid, Mr Grosvenor (L. remirezi, 80). Scorpionfish, Mr K. Dryden (81). Platys, Mr F. R. Kendrick (black platy, 81). Mollies, Mr A. M. Kinsley (M. aphana, 80). A.S.A. livebearer, Miss M. Scott (mosquito fish, 82). Breeders, tropical egg-layer, Mr Grosvenor (N. anomala, 80). Breeders, tropical livebearer, Mr L. G. Little (salt and pepper platy, 79). Labyrinth, Mr D. Soper (moonlight gourami, 81). Fighter, Mr R. S. Wood (83). Egg-layering toothcarp, Mr D. W. Ellis (N. rickerti, 81). Tropical catfish, Mr M. J. Wood (Clarias, 84). Corydoras and Botia, Mr G. Greenhall (Botia, 82). Rasbora, Mr E. Cox (yellow tail, 82). Danios and white clouds, Mr W. D. Harper (spout danio, 79).

A.S.A. tropical egg-layer, Mr L. G. Little (B. macracanthus, 82). Guppies, Best single, Mr J. Thorne; best opposite, Mr T. J. Croucher; best breeders, Mr D. Soper.

Coldwater, Common goldfish and London shubunkins: 1, Mr J. H. Knapley (common goldfish, 79). Singletail and comets, Mrs M. Dudley (singletail, 77). Twin-tailed goldfish, Mr R. D. Smith (94). A.S.A. coldwater, Mrs M. Dudley (trout minnow, 75).

EAST LONDON A. & P.A. won the cup for the club with the highest number of marks at the ROMFORD & BEACONREE A.S. display that was held as part of the Dagenham Town Show. The class winners were:

Furnished aquaria, club: Iford & D.A. & P.A. Furnished aquaria: individual: Mr D. Durrant (Thunyah A.C.) Breeders livebearers: Mr B. T. Mather (black woods, Walthamstow). Breeders egg-layer: Mr W.

Corby (R. miled, East London). A.S. swordtails and platys: Mr B. T. Mather (red-eyed red, Walthamstow). A.S. mollies: Mr M. Smith (liberty mollie, Walthamstow). A.S.V. livebearers: Mrs R. Greenhall (female guppy, Kingston).

Dwarf cichlids: Mr J. A. Pollard (P. jansoni, Kingston). A.S.V. cichlids: Mr R. F. Roth (open-acers, Iford). A.S. barb: Mr R. Argent (black ruby barb, East London). A.S. danio: Mr E. Nicol (spout danio, Thunyah). A.S. labyrinth: Mrs M. Tucker (S. gonawi, unaffiliated). A.S. characin: Mr R. Kettle (parula, best tropical fish in show, Hatlow).

A.S.A. tropical fish, egg-layer: Mrs M. Tucker (black shark, unaffiliated). A.S. egg-layering toothcarp: Mr G. Green (L. anurolepis, East London). A.S. aquaria plant: Mr B. T. Mather (Walthamstow). Junior tropical/coldwater: Clive Durrant (moonlight gourami, Thunyah). Common goldfish, London shubunkins: Mr H. G. Berger (common goldfish, Iford). Singletail goldfish and comets: Mr H. G. Berger (British shubunkin, Iford). A.S.V. fancy goldfish: Mr R. Anderson (veiltail goldfish, best coldwater fish in show, unaffiliated).

In Brief . . .

with. Meetings are now held on the first Tuesday in the month at 8.0 p.m.

... THE TALK given by Mr R. Matley on general aquarium management to members of AMESBURY & D. A.S. was appreciated by all. At this meeting, the three classes in the bottle show, judged by Mr C. Lennox, were won by: a.v. coldwater, Mrs Harris; characins, Mr Elliott; livebearers, Mr Harvey.

... MEMBERS of TONBRIDGE & D. A.S. were entertained at their last meeting by a B.K.A. slide show 'Rivulins—top spawners'. There was a record entry of 23 in the table show's second pairs of egg-layers class, in which Mr Ron Taylor won with a fine pair of *P. arboreus*. The class for fighters, not as well supported, was won by Mr Iain Matheson.

... BARNESLEY T.F.S. members greatly enjoyed the 'Twenty Questions' quiz arranged by Mr I. Brown of Mabdon's pet store at their July meeting. The table show was won by Mr C. Claypole. Meetings will now be held on the second and fourth Tuesday in the month at 7.30 p.m. in the Alambra Hotel and anyone wishing to attend will be welcome. Further details from Mrs F. M. Howard, 67 Woolley Colliery, Darton, Barnsley.

... TAMWORTH & D. A.S. annual show (closed) is being held on the 20th September at College Lane School, Tamworth. There are over 20 classes, refreshments are available, and there will be a rare fish and oddity display. Aquarist society members are especially welcome. Complimentary tickets are available, though limited, from Mr P. Alfred, 79 Comberford Road, Tamworth, Staffs.

... A CHANGE of secretary for the ASSOCIATION OF YORKSHIRE AQUARIST SOCIETIES. The position is now held by Mr A. B. White, 1 Moss Carr Road, Long Lee, Keighley, Yorks (phone Keighley 7219).

... A NEW society has been formed in Bideford, N. Devon. Please write to Mr J. Allen, Green Porch, Orchard Hill, Northam, Bideford, for all details.

... FROM 9th September, HARBOROW A.S. will meet at the Methodist Church Hall, Locket Road, Wealdstone, Middlesex. Meetings are held on the second and fourth Tuesday of the month and new members are welcome.

... AT the first meeting of HYDE A.S., held at the White Hart, Old Road, Fowery Field, Glossop at the end of July, a committee of seven was elected. Ideas were discussed for future meetings, which, it is hoped, will include guest speakers to give expert advice. Further details from secretary Mr B. Riley, 133 Manor Park Road, Glossop, Derbyshire.

... RESIDENT judge, Mr M. Stray, gave a helpful explanation to members of BISHOPS CLEEVE A.S. of how the fish were pointed at the July table show, in which Mr C. Scriven won. This had followed the evening's main activity, a colour-slide quiz.

... A NEW venue for SUFFOLK A. & P.A. meetings is the Royal William Hotel, London Road, Ips-

... MR R. WOOLVERIDGE has amassed 42 points in the **BORHAM WOOD & D. A.S.** 6-monthly competition for the Club trophy (2, Mr P. Abbott, 32; 3, Mr D. Roach, 25). Another member successfully competing in table shows is P. Moriarty, a junior member, who won the best fish in show award in the loaches and botias class at a recent table show.

... AT the **NEW FOREST A.S.** July table show, Mr Williamson achieved a first in the fancy goldfish class with a moor and Mr D. Harding had the first and second places in the tropical plants class. This had followed a tape-recorded lecture presented by Mr H. Earle and Mr L. James of Bournemouth A.C. on pond animals.

... **BRISTOL A.S.** members are having a very successful show season. Among successes is that of Mrs P. Kimber in securing the best fish in show award at the Llantwit open show, and of Mr F. Brown in obtaining five firsts, two seconds and three fourths at Newport and winning the highest number of points at the Bristol T.F.C. show. Mr Brown has also been giving fellow club members the benefit of his experience as one of the members of a brains trust answering questions at a club evening. Mr H. C. B. Thomas, Mr S. Lloyd and Mr W. Ham were the other members of the team.

... **BRADFORD & D. A.S.** member

THE HENDON CONGRESS is this year being held at the *Whitefield Secondary Modern School, Claremont Road, Hendon, London, N.W.2* on Saturday evening, 22nd November 1969 at 6.0 p.m. Secretary of **HENDON & D. A.S.** Mr Keith Parbrich informs us that it is with great pleasure that the Society announces that this year's speaker is *Arend Van Den Niessenhuizen of Holland*. Mr Niessenhuizen is famed as one of the world's leading fish photographers besides being an expert in their breeding. The Society feel that this Congress will be enjoyed by all, experienced aquarist or beginner alike. There will be the usual opportunity to meet many well-known personalities in the hobby; good refreshments are available, the venue is easy to reach and there is ample parking space for cars and coaches. Early applications for tickets should be made to Mr Keith Parbrich, 3 Holme Way, Stanmore, Middlesex (phone 01-954 2233). Tickets 5/ each, juniors half price.

Mr H. Foden won the thanks of all fellow members when he stood-in for a speaker who did not arrive at a July meeting and gave an entertaining talk about his experiences in the hobby. Another member, Mr R. Winterburn, gave a most interesting talk on aquarium plants, drawing on his own very considerable experience in growing them.

... **NOTTINGHAM & D.A.S.** have arranged their open show for Sunday, 14th September at The Drill Hall, Triumph Road. They also report, with deep regret, the death of Mrs Lynn, wife of Mr Harold Lynn, a staunch worker for the Society for many years.

... **EDITOR of YORK & D.A.S.** 'Lateral Lines' Mr G. B. Hawksby has followed his usual excellent practice of furthering his hobby on holiday and took advantage of a vacation in Switzerland to contact Swiss aquarists. Although able to actually meet only one aquarist, Mr Hawksby reports... 'a worthwhile visit this turned out to be for although this gentleman had only three tanks with around two dozen fish, it transpired that one tank was something over 6 ft long by 2 ft deep and contained about 12 marine specimens, some of which I had never seen illustrations of, let alone specimens'.

... **NEW secretary for CLEVELAND A.S.** is Mr K. Low, 2 Farmbank Road, Ormesby, Middlesbrough, Teeside. The Society apologise for any inconvenience caused by incorrect information about the date of their open show. This is being held in the British Legion Hall, West Gate, Guisborough, Yorks on Sunday, 18th September. Show secretary is Mr R. L. Glover, 6 Dorset Road, Guisborough, Yorks.

Dates for Your Diary

12th-12th September. **BRISTOL A.S.** Open Show. Bishopston Parish Halls, Gloucester Road, Bristol. Enquiries to Mr S. Lloyd, 4 Curlew Close, Frenchay, Bristol.

12th September. **SOUTH PARK AQUATIC (STUDY) SOCIETY** Open Coldwater Show. Sutton Adult School, Berhill Road, Sutton. Details from 151 South Park Road, Wimbledon, London, S.W.19.

12th September. **RADLETT** Section, F.G.A. Open Show. Classes for non-members. Booking 1.0-3.30 p.m. Details from Mr L. Smith, 2 Mervens Road, Holloway, London, N.19.

12th September. **FOUR STAR A.S.** first Open Show. British Legion Hall, High Fields, Hemsworth, Nr Pontefract, Yorks. Booking 12.30-2.15 p.m. Judging commences 2.30 p.m. (F.N.A.S. standards). Details from Mr H. S. Pugh, 2 East Street, Firwellam, Nr Pontefract, Yorks.

12th September. **EALING & D. A.S.** first Open Show. Schedules from Mr R. Barrett, 8 Grove Court, The Grove, Ealing, W.5.

12th September. **NOTTINGHAM A.S.**

Open Show. Drill Hall, Triumph Road Nottingham. Schedules from Mr N. B. Kenney, 34 Leonard Avenue, Sherwood Nottingham.

12th September. **OLDHAM & D. A.S.** Open Show. The Study Centre, Werneth Park, Oldham, Lancs.

20th September. **HOUNSLOW & D.A.S.** Open Show. Youth Centre, Cecil Road, Hounslow. Schedules from Mr F. Smith, Anala House, 7 The Greenway, Hounslow, Middlesex.

21st September. **STONE A.S.** Open Show. Walton Community Centre, Walton, nr. Stone, Staffs. Schedules from Mr M. Dale, 14 Leverier Close, Great Bridgeford, nr. Stafford.

27th-28th September. **CAMBRIDGE & D.A.S.** Open Show. Guildhall, Market Square, Cambridge. Schedules from Mr L. Geoghegan, 15 Leys Road, Cambridge, CB4 4AT.

28th September. **BIRMINGHAM** Section, F.G.A. Autumn Open Show. Globe Farm Community Centre, Globe Farm Road, Stochford, Birmingham. Details from Mr M. H. Dolingpole, Fairfield, Radford Road, Alvechurch, Birmingham.

28th September (change of date). **CLEVELAND A.S.** Open Show. British Legion Hall, West Gate, Guisborough, Yorks. Show secretary, Mr R. L. Glover, 6 Dorset Road, Guisborough, Yorks.

28th September. **HUCKNALL & BULWELL A.S.** Open Show. Bulwell Youth Club, Coventry Road, Bulwell. Details from Mr T. H. Pinner, 27 Wings Drive, Westville, Hucknall, Notts.

28th September. **MEDWAY A.S.** Convention. St John Fisher School, Chatham, Kent. Guest speaker, Mr Ray Skipper. Details from Mr G. A. Craft, 73 Dargers Road, Walderslade, Chatham, Kent.

28th September. **NORTHAMPTON & D.A.S.** Kingshore Community Centre, Northampton. Schedules from Mr R. Memory, 121 Booth Lane South, Northampton.

28th October. **ASSOCIATED SOUTHERN AQUARISTS' SOCIETIES** Convention. Portsmouth Community Centre, Telford Avenue, Portsmouth.

11th October. **THE GOLDFISH SOCIETY OF GREAT BRITAIN** Convention and Open Show. Sutton Adult School, Berhill Road, Sutton, Surrey. Open 2.30. Judging 3.0-4.30 p.m. (Programmes and lectures for visitors). Details from Mrs P. Whittington, Pines Lodge, Ringley Park Avenue, Reigate, Surrey.

18th-19th October. **BRITISH AQUARISTS' FESTIVAL**, Belle Vue, Manchester.

26th October. **HALIFAX A.S.** Open Show. South Balcony & Co. Ltd., Holmfild Mills, Halifax. Schedules from Mr A. G. Whyte, 11 Rothwell Drive, Halifax.

27th October and November. **THE AQUARIUM SHOW '69** at the Royal Horticultural Society's Old Hall, London, S.W.1. and November. **MIXENDEN T.F.S.** Open Show, Mixenden Community Centre, Clough Lane, Mixenden, Halifax, Yorks. Schedules from Mr J. H. Brown, 9 Clough Bank, Mixenden.

8th-9th November. **HEYWOOD & D.A.S.** Open Show (joint event with Heywood Horticultural Society).

22nd November. **HENDON CONGRESS**, Whitefield Secondary Modern School, Claremont Road, Hendon, London, N.W.2. 6 p.m. Tickets from Mr K. Parbeck, 3 Holme Way, Stanmore, Middlesex.

6th December. **F.B.A.S.** Annual General Meeting, Conway Hall, Red Lion Square, Holborn, London, W.C.1.

14th December. **HORSFORTH A.S.** first

Open Show, Greenacre Hall, Rawdon, nr. Leeds. Schedules from Mrs R. M. Helm, 29 Wellington Road, Leeds 12.

1970 Bookings

2nd May 1970. **BURY & D.A.S.** Open Show.

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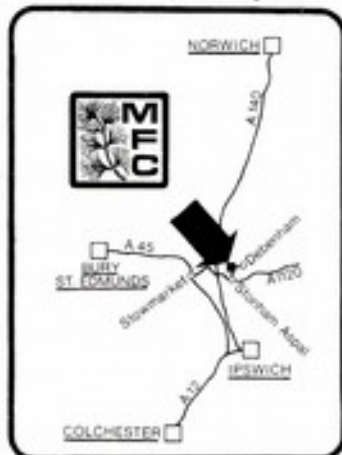
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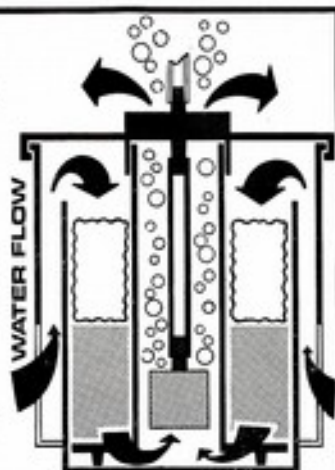
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