

# TALK



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The Next General Meeting will be held  
at the C.F.A. Hall, Cnr. Moore Street,  
and Barry Drive, 7.30pm - 8th September  
1975.

11th Oct.

EDITORIAL

Once again the same select minority have been left with the task of ensuring that your club magazine is produced and printed on time, is indeed unfortunate that this situation should occur. Your present Editors find themselves in the position of publishing a magazine on the eve of their departure to Melbourne. What about some support for the club magazine. The more people involved the less difficult it becomes to produce a quality magazine. I do hope your future editors receive more support..

With this months magazine you will notice a new format inside the new cover, I do hope this will be the encouragement needed to prompt a few members into action.

We wish to thank Tom Bajna for his kind donation of Fosters for the Pet Shops to announce the time and venue of club meetings. This will perhaps aid a few members in their attendance at club meetings.

Included in this months issue you will receive an opinion form which we would like each member to complete and return together with comments to the next General Meeting. These forms will remain anonymous to prevent any embarrassment, so please be frank and say what you feel.

In the forthcoming magazines it is envisaged that a series of articles for the beginner will be compiled. We have initiated this move this month with an article on Water pH. We feel sure that this type of article will be of great benefit not only to the beginner but also to the established aquarist who may have taken points for granted.

(Cont'd from page 2.)

It was resolved at the last executive meeting that following the introduction of the new magazine format - it will be offered to all retail pet shops outlets for distribution free to interested shop clientele. This we hope may encourage not only new members but renewed interest from the pet shop owners in our club activities and professionalia.

N.B. Should any person be interested in a short or long term advertisement in Tank Talk, please feel free to contact the Societies Secretary; Mr. Jim Gibson, 2 Best Place - CHARNWOOD  
Phone; 583722.

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#### BREEDERS AWARD SUB-COMMITTEE

At the last Executive Committee Meeting, held at Allan Woodbury's house, two members were elected to the Breeder's Award Sub-Committee. The are; Brian Fitches, 13 Affleck Place, Scullin ACT, Home- 545326 - Business 730426 ext 386 or 385;- and David Harris - 52 Croton Street Rivett ACT - Home: Business 730426 ext 450. Any person who wishes to register spawnings for the last 2 months (from 1st July 1975) and is able to produce evidence of same is to contact either Leon Benson, 33 Haddon Street, Hackett ACT - Home: Business 730426 ext 450 or any of the above sub-committee members.

Future registrations may be affected by filling in the registration form (sample illustrated) and then by contacting the sub-committee for verification.

Points awards to be allotted later, after compilation of scale of awards. Still awaiting replies from various other aquarium societies.

(Cont'd page 4.)

# OPINION POLL

This month we are asking the members:

Do you like the way the club is going at present?

Yes

No

What is your opinion of the club?

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Would you like to see any changes?

Yes

No

If so, what are they?

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Please put your answer in the box at the next General Meeting.

Thank You

# club news <sup>Page 5</sup>

Once again the General Meeting was well attended.

It is good to see the continued interest of members in the club activities. The results of last months table show are as follows:-

- 1 - Michelle Merryful + Rainbow Shark
- 2 - Michelle Merryful - Comet Goldfish
- 3 - Glenn Conyard - Black Shark

The name Michelle Merryful seems to be appearing with some regularity in this column. Perhaps a few of the older members could take a lesson from young Michelle.

The executive committee meet this month, at the home of Allan Woodbury, to fetch their way through a wealth of general business.

First was the election of a new Breeders Award Committee with D. Harris and B. Fitches nominated and both being elected, congratulations to them both. The subject of the magazine cover was raised again, this month. As you may well have noticed, it finally made it to print. A resolution was passed to provide members with more basic information on the hobby, through the club magazine.

Glenn and Rose of the Iets Palace, Queenbeyan, have donated a quantity of 'Breeding Fishes' by T.F.H., which are available to anyone who comes in contact with the breeders award sub-committee.

The committee is also aiming for more family participation at club meetings, the children will be encouraged to participate and the discussions will be aimed for them as well.

(Cont'd from page 3)

Reg. No.....

Canberra And District  
Aquarium Society

BREEDERS REGISTRATION FORM

MEMBERS NAME.....

MEMBERSHIP

NO.....

ADDRESS.....

.....Tel.No.....

SPECIES SPANNED:

SCIENTIFIC NAME.....

COMMON NAME.....

DATE SPANNED.....

VERIFIED BY..... MEMBERSHIP

NO.....

DATE.....

SIGNATURE OF BREEDER.....

DID FRY SURVIVE FOR 30 DAYS YES

NO

WITNESSED BY:.....

( Cont'd from page 6 )

A further summary of the committee meeting will be given at the next general meeting.

The public display proposed at the last general meeting will, unfortunately have to be postponed until renovation of the Monaro Hall have been completed. Volunteers will be called for at the next meeting for a Show-Sub-Committee to cover this event.

We are pleased to announce that Mark O'Connor will be giving a lecture on Plants for the Aquarium, at the next meeting. This I am sure will interest us all as this is one facet of the hobby which is often neglected, through lack of information.

Mark being a man of many talents is also a well known poet - I guess some of us have it.

The Table Show for David Lee was the feature event of the month, attracting a large number of entries from a pleasing large attendance. A big vote of thanks to Soren and Julie Jenson for the use of their premises on the night. I'm sure the question and answer period solved many of the problems that have been troubling us. The results of the Show were as follows:-

Best Fish;

Rumble Mac Catfish (Loe Saimensis)  
Glenn Conyard

Rare Fish;

Talking Catfish  
Jack Van Hest

Best Australian Fish;

Australian Rainbows (M. Flovialitis)  
Glenn Conyard

Best Cichlid;

(Cont'd page 13.)

Reghole Cichlid (Aequilon Neuroi)  
Jack Van Hest

WATER CONDITIONPH.

The pH of water is a measurement of its acidity/alkalinity. This is done by the use of a scale - pH7 being neutral. Lower pH values indicate a more acid condition - higher pH values indicate more alkaline conditions. The values are arranged in powers of ten. Thus a pH 5 is 10 times as acid as water of pH 6. Water at pH 4 is 10<sup>2</sup> or 100 times as acid as water at pH 6. Water at pH 3 is 10<sup>3</sup> or 1000 times as acid as water at pH 6 and so on.

The pH of an aquarium can fluctuate greatly, even within the brief space of one day. The change in pH is brought about by two opposing chemical reactions.

Assimilation & Respiration

Assimilation is the process by which plants build starch from water and carbon dioxide thus consuming carbon dioxide and produce oxygen - this makes the water more alkaline.

Respiration is the process by which animals obtain energy from carbohydrates in combustion with oxygen. Thus consuming oxygen and producing carbon dioxide making the water more acid.

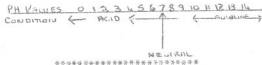
In the majority of freshwater tanks the Assimilation process is predominant and the water is somewhat alkaline - between pH 7.3 and 8.5. By the aquatic plants and algae gradually consuming carbon dioxide the pH increases. Water above pH 9 is harmful to most tropical fish.

Most tropical fish in their native habitats enjoy a highly acid water with pH values of between 5.6 - 6.8. (Cont'd page 9.)

(Cont'd from page 8)

Canberra tap water is slightly Alkaline pH 7.2 and soft. With the effects of foot filtering the pH can be lowered thus creating a natural condition for the fish - continuous measurement of pH is necessary as pH values below 5.8 can be dangerous to most tropical fish.

Next months Magazine will cover the measurement and control of the pH factor.



THE FIGHTING FISH

(BETTA SPECIENS)

Very few of our aquarium fish cause such gasps of amazement and admiration as the fighting fishes. In furnished an unfurnished aquaria they maintain their glowing reds and blues and greens and with the slightest encouragement display their flowing fins to the greatest advantage. People who are normally disinterested in fish stand aghast in astonishment wherever these living gems are exhibited.

The magnificent specimens of Betta seen at fish exhibitions today, are the results of many years selective breeding and bear only a faint resemblance to their ancestors, imported from Siam many years ago.

Bettas like comparatively warm water - 75° to 80° F keeps them happy. (Cont'd next page)

(Cont'd from page 9.)

Normally they are peaceable with other species of fish and it is quite usual to have either a male, or a pair, in a community tank. In one case however this did not work out, a Betta in my possession attacked a Zebra Danio without any prior warning and after being shaken like a piece of rag, the Danio expired almost at once.

Such savagery is usually reserved for members of their own species, particularly during breeding periods. When the male first feels the urge to reproduce his kind he does not seek a female fish until he has prepared a nest of bubbles at the surface of the water. He works for long hours at this self-imposed task, and it is commonly believed that the bubbles blown from his mouth are prevented from bursting by being coated with a secretion from the buccal cavity. Certainly no ordinary air bubble would remain whole for such a time. If floating leaves are available, the nest may be constructed beneath their protecting undersides. In such cases the leaves may be lifted clear of the water surface by the pressure of the air bubbles.

Too betide any fish which approaches during the construction of the nest. Females of the same species wisely keep out of the way, knowing the penalty for lack of caution is torn and bleeding fins, if no worse. Likewise, when the job is completed, a female unwilling or unready to mate risks death. If willing she will allow herself to be shepherded to a position beneath the nest. It is then that the male demonstrates the amazing suppleness of his body. After a short preliminary display of his fins, during which he swims round the female twisting just one way and then the other, he literally wraps his body in an almost complete circle round that of his spouse. For a moment or two the pair remain stationary, with the female usually turned upon her back. (Cont'd next page)

(Cont'd from page 10)

Then they drift apart seemingly in a coma and a number of white eggs, each no bigger than a pinhead, begin their downward journey to the bottom of the tank.

The male swims downwards and gathers the eggs in his mouth, followed by a split-second afterwards by the female. Both swim back to the surface and spit out the eggs into the midst of the bubbles, which prevent them falling once more to the bottom. The embrace, the pause and the egg gathering is repeated until the female is spent. By this time, up to one thousand eggs will be safely buoyed up at the surface.

Now the mood of the male changes. From being a gentle and solicitous lover he becomes a savage wife beater. The female quits and hides away from his fury wherever she can find cover. It is only humane to remove her as gently as possible.

Incubation is rapid and usually within 48 hours the fry begin to emerge from the eggs. The bubbles now support, their tiny wriggling bodies. Any violent movement may rupture the bubbles in their places, causing the fry to tumble out of the nest. Father is waiting for just such an emergency and is utterly reliable. A stroke with his fins and he is there to catch the fry in his mouth. Back he goes to the nest and hurls the body back through the bubbles to safety.

Providing that he has been well fed on ample live food before starting his vigil and he is not unduly disturbed he is not likely to consume any of the fry.

It has sometimes been stated that fighters do not mind living in cramped and dirty conditions because they are independant, (Cont'd page 12)

(Cont'd from page 11)

of oxygen from the water. This is only partially correct - adult fighters will exist in dirty water that is to say, dirtier than that tolerated by other species, but not in really foul conditions. The fry however must not be kept in anything but clean surroundings, for until they are three weeks old they are without the auxiliary breathing apparatus (the labyrinth) which gives their order its name.

Only the tiniest of Infusoria can be tackled by the fry. If no culture is available, powdered hard boiled yolk of egg can be substituted. Little and often is the maxim to be followed with this method of feeding. Too much will foul the water, keep the food gently moving at or just under the surface. This is best achieved by any slight aeration. Follow up as the fry grow with brine shrimp (Cyclops), micro worm, tiny Daphnia gnat larvae - any live food small enough for the youngsters to swallow without choking. Given sufficient and warm enough water - about 78° to 80°F, growth should be steady and colours start to develop within four to five weeks. At first it is impossible to sex the fry but when a female is approx two months old, a tiny white spot locking for all the world like a protruding egg will appear at her vent. No male fry ever show such a spot.

A curious fact, noticed by the author is that fry raised together is the absence of fighting. They live harmoniously in a group, however if one or more is removed it seems to upset the equilibrium and squabbles ensue.

When sexing is possible, select the finest males and raise them in separate containers, one to each container. They will benefit by being given the greatest possible space, but if space is limited they can live and mature in a 2lb jam jar floated

(Cont'd from page 12)

Best Cichlid;  
Keyhole Cichlid (Aequidien Mouriei)  
Jack Van Hest

Best Cold Water;  
Shubunkin  
Sarah Van Hest

Best Tank of Gouramis  
Arthur Matcott

The gathering adjourned to Sarah & Jack's residence for refreshments and more fish talk. David told us of his induction in the hobby and the events which led to his starting in business. He told the gathering of Singapore and we also found out that David's first love are Orchids.

Unfortunately due to the short notice given, it was unavoidable that some people were not informed or were unable to attend. I'm sure we all understand and are please that the show was such a success.

David will be forwarding prizes to the lucky winners in the near future. The prizes are being supplied very generously by Eugene's Jewellery Company, 3-16, 3rd Floor, Peninsula Shopping Complex, Coleman Street, Singapore 6.

Many thanks to David Lee for his enthusiasm in viewing our show and we are looking forward to seeing more of him in the future.

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(Cont'd from page 12.)

in heated water - keep tops covered to prevent them from jumping out. Females are usually quite happy enough together in on large aquarium.  
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# The Aquarist

Dear Aquarist;

1/- I have a pair of Rams and I am having trouble sexing them. One appears to have a slightly longer dorsal fin than the other, however the others dorsal appears as if it may have been chewed, so this method of sexing seems unreliable in this case. The other sexing method mentioned in books (e.g. Axelrod) refers to the first few rays of the dorsal fin. However my rams are not fully mature so in the immature fish how much longer than the females are the first few rays on the males dorsal fin. The rams behaviour suggests that they may be of the same sex.

2/- Is it true that a male Firemouth will treat a female as if she were (as a male) a threat to his territory and drive her off if she is not ready for breeding? Or do I have two males? (The chewed fin syndrome again).

Brian Fitches.

A.1.- Most fish of this size when kept in a community tank suffer from battle scars and fin damage, this making the described method of sexing difficult.

The Aquarist suggests that the fish in question be removed to a smaller tank - 10 gallons - fed on high protein foods, such as Tubifex and Daphnia. In about two weeks their finnage should have repaired, thus fascilliating the use of the finnage form of sexing.

In an immature fish ( $\frac{1}{2}$ size) the dorsal fin system cannot be used.

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AQUARIUM GOURAMIES

by Jas. Stott

Gouramies seem to command a fairly steady measure of popularity and there is always a reasonable number of enthusiasts to champion their cause. This is understandable, of course, for they are not only attractive but interesting as well with their breeding habits.

DWARF GOURAMIES:

I think it is true to say that the male dwarf gourami (*Colisa lalia*), when in top condition, is one of the most colourful of our aquarium fishes. Unfortunately they have a tendency at times, to seek out the darker parts of the aquarium, to hide themselves behind rockwork or in thickets of plants. This often happens when too light is somewhat strong and can be avoided by the use of floating plant life to break up the full force of surface light. Riccia, Duckweed (*Isaza*) or floating water fern is most suitable for this purpose.

Generally the dwarf gourami is a ready breeder and when the male builds the bubble nest at the surface he usually incorporates into it a considerable amount of plant material, and Riccia appears to be a natural choice if available. Suitable temperature for encouraging breeding seems to be around 80°F after good conditioning of the breeding pair.

While there is no great difficulty in getting the dwarf gourami to breed there is, on the other hand, the need for considerable care in the early stages of rearing the fry. The reason for this is the extreme smallness of the fry, and, therefore the need for a first food which is small enough for their tiny mouths. Green water seems to be the best for the first 3 or 4 days, but if this is fed by the drip method it is essential that the temperature of the added water should be the

(Cont'd from Page 15.)

same as that of the breeding tank because surface chilling must be avoided as much as possible. It is for the same reason that a close-fitting cover glass is recommended: draughts across the surface are extremely detrimental during the early days. Infusoria can be supplied on the fifth or sixth day along with the green water and the two supplied together until around the twelfth day; the green water can then be stopped. ( Dried shrimps and screened Daphnia can follow, when growth should proceed rapidly. Remove the female as soon as spawning is over and the male when the fry become absolutely free-swimming.

#### BLUE GOURAMI:

Whereas the dwarf gourami can be considered a good community fish the blue gourami (*Trichogaster trichopterus*) should be carefully observed when introduced to a community of fishes; some specimens will accept community life quite readily whereas others can become aggressive. They are, however, attractive and when in good condition the blue colouring is delightful. A fully grown specimen can reach a length of 4½ to 5 inches when reared under rooey conditions. They are also ready breeders and a temperature of 80°F should prove suitable for the breeding tank. It is generally the accepted procedure to remove ( the female after the spawning has taken place, because, as with most of the gourami species, the male is liable to become aggressive in the protection of the nest.

The Thick-lipped gourami (*Colisa labiosa*) is about 1½ inches larger than the dwarf and not so colourful, but it is, nevertheless, a handsome fish and it is a much safer proposition in the community tank than the blue gourami. Unlike the dwarf the thick-lipped gourami, generally, does not incorporate vegetable matter into the bubble nest and the nest covers a larger area among the surface plants. of which, (Cont'd page 17.)

# The Aquarist

(Cont'd from Page) 14

A.2.- The sex of the Firemouth is determined by the size of the Anal Fin. The Firemouth Male normally will chase a male whilst preparing an area for spawning. His mates lack of condition or readiness for spawning will not deter him normally.

By the use of a glass partition bring on the condition of each fish until they are both in prime condition and of about the same size. This however is not guaranteed that they will breed as they may be incompatible. "False" mating or spawning may occur between two males or two females. Sexing young Firemouths is awkward as finnage has not developed sufficiently.

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(Cont'd from page )

A lovely gourami that should interest the experimental aquarist, for there is much to be learned about this particular species, is the chocolate gourami (*Sphaerichthys osphromenoides*). This fish is about the same size as the croaking gourami and just as peaceful. It appears to need a fairly high temperature, in the region of 85°F and slightly acid water (pH around 6). A diet consisting of a large proportion of insect seems to be essential, but this must be small, for the fish has a tiny mouth. It will, however, take dried food, especially dried Daphnia and shrimp. At one time it was thought to be a mouth breeder but later reports suggest that it is a bubble nest builder.

From: THE AQUARIST - September 1961

Cont'd from page 16)

for this species, I think, the most suitable is the floating water fern.

Many enthusiasts vote the pearl gourami (*Trichogaster leeri*) their favourite gourami, and there is no doubting its beauty, but it is at times, inclined to be temperamental and, like the dwarf, shy of bright top light. The fish appreciates thickly planted tank and some surface plants in well-matured water. Given conditions of this sort, with plenty of live food, it will soon display its most attractive colouring. The pearl possesses a fairly peaceful disposition and grows to a length of 4 inches.

The snakeskin gourami (*Trichogaster pectoralis*) has not been with us in this country as long as the pearl but, if large tanks are available (for it is a larger species when fully grown), it is well worth trying. It is not so colourful as the pearl but it is still quite attractive fish and does not seem to have any aggressive habits in the community tank. The breeding follows much the same lines as those of the pearl, but a larger tank is suggested.

#### KISSING GOURAMI :

Another species for the larger-tank aquarist is the kissing gourami (*Helostoma temminckii*), but this is no fish to introduce to a community tank in a casual manner; while some settle without giving trouble other can become persistent bullies. They build no bubble nest, and the eggs simply float at the surface. It is advisable to remove the breeding pair immediately the spawning is over in case egg-snatching commences. Some pairs will leave the eggs alone whereas others will start to devour them as soon as they finish spawning. They are great algae eaters and this indicates that a fair amount of vegetable matter is needed in their diet for top condition; finely chopped spinach and lettuce should be given along

(Cont'd from page 18) 18 19

with live food such as earthworms and Tubifex. They require a water temperature around 80°F. The temperature should be pushed up to 82-83°F for the breeding tank, in which one or two thickets of plants should be provided and the surface well covered with floating water fern.

Turning again to the smaller sized species, the croaking gourami (*Trichopsis vittatus*) is worthy of consideration. Here is a fish which is said to make croaking sounds when in breeding condition. Although some aquarists claim to have heard this, I cannot say I have had that experience. It is the vibration of the air in the labyrinth organ which makes the sound. The colouring is not so bright as that of some of the other gouramies but it is an attractive fish and when fully grown is about 2½ inches in length. It seems to possess a peaceful disposition and is, therefore, suitable for a community life, although it never looks at its best when seen in the company of highly coloured fishes, for the croaking gourami owes much of its attractiveness to the iridescence from reflected light.

Surface plants are appreciated by this fish and Riccia appears to be the natural choice. The bubble nest is built among this surface vegetation and although the nest is small it seems to be very durable for the size. As with most of the nest-building gouramies it is the male that cares for the eggs and fry, but when the free-swimming stage is reached, removal of the male is advisable. The female can be taken from the breeding tank after spawning.

A temperature of 80°F is about right for the breeding tank and well matured water should be used. Conditioning for breeding should be encouraged by feeding with live foods such as Daphnia, earthworms and white worms.

To:	
Of:	

