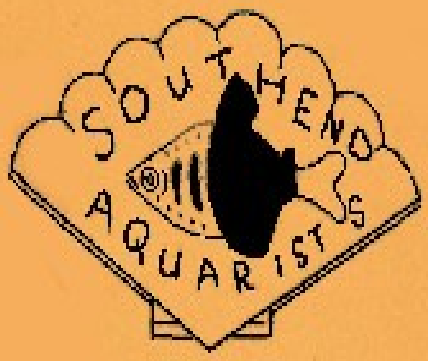
SOUTHEND, LEIGH & DISTRICT

AQUARIST SOCIETY



SPRING 1963

QUARTERLY MAGAZINE

THE SOUTHEND, LEIGH AND DISTRICT AQUARIST SOCIETY

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The society meets at 8.00 p.m., on the first and third Tuesday in each month at:-

THE LIBERAL HALL,
Clarence Road,
Southend-on-Sca,

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EDITORIAL

Dear Readers

After yet another lapse this JOURNAL has agasin been revived in this the 25th year of the clubs history. It is hoped that this time we may be able to continue unbroken publication for many years at least.

This issue has been called "Spring Issue"; it`s appearance has, unfortunately been rather delayed, mainly by the fact that typing and duplicating are still novelties to me. I must appologise for any difficulty you may experience in reading various words or letters, as my technique is as yet far from perfect. We hope that next edition will appear about the middle of July.

Articles for this issue have been provided entirely by members of your committee, with exception of the articles on the Blue Acara and the Mossambique Mouthbrooder. For these contributions, thanks are due to our two youngest members, Harvey Holmes and Clive Bennett.

It is hoped that this effort will encourage other members to contribute to future issues, for although fortunately we still have some copy in hand for the Summer number, more will be needed if good work is to be produced in the future.

Finally I would like to point out that if you have any suggestions for additional topics which you think should be covered in the club meetings, the committee will be only too pleased to hear from you

The Editor

CLUB NEWS

Welcome tonight (7th May) to members of the Grays/Thurrock clubwho are competing against us in an Inter-club Table Show. Classes are for Characins, Barbs, and Livebearers, and we hope an enjoyable evening will be had by all.

LONDON ZOO OUTING (26th May)

Practically all seats are now booked. The coach will depart from Southchurch at 10 a.m., picking up at carious points in the Borough and at Hadleigh, Thundersley, etc., Members will be notified of more exact times and places at the meetings tonight and on the 21st May.

(please turn to next page)

WORLD OF THE AQUARIST TODAY

by L.E.Willis

In Ceylon on Friday evening, the fish in the dealers` tanks on Saturday. *Myriophyllum* growing in the nursery pools in Florida, cut, and collected a few hours later at London airport. Indeed today it`s a small world.

And the aquarist himself? I have an airmail letter here from the Aquarist Club of Kenya telling me of their members trips- 400 miles by road to the East African Coastline to collect marine fish (Sargent Majors, Damsels and Dragon fish). And here`s another recent one from Mr Luis Angel Diez, a fellow aquarist in Buenos Aires who is a member of the Argentine Association of Aquarists, We look forward to his news and seeing some of his photographs.

Our Romford club friends have received the club bulletin of North Eastern Indiana Aquarium Society, which was formed in 1957 and has about fifty members. They meet on the first Sunday of each month at 2 p.m., and have movies, lectures, Bowl Shows, and Auctions. Single membership is 2 dollars (about 13/6d) or 3 dollars per family. It is good to hear that in most cases the whole family joins in the Club activities.

With the popularity of photography, the increasing use of tape recorders, and jet air transport, there exist wonderful opportunities now for easy exchange of news, talks, and knowledge between aquarists on opposite sides of the Globe.

Yes, for the aquarist of today it is truly a small world. An interesting, intriguing world.

CLUB NEWS (continued)

A futher outing, this time to Kingfisheries is proposed for 21st July.

Romford Visited On the 18th of April some 16 members from our Society visited the Romford club, who were showing a film and slides from Sunderland Aquatic Club, taken at a recent British Aquarists Festivsal (Belle Vue, Manchester). The fact that the Romford aquarists had temporarily lost the use of their usual hall, and we were all jammed into emergency accomodation, did not deter from theinterest of the evening.

Romford Visiting – Discus slide show On the 21st of May we will in turn act as hosts to our Romford friends who will join us for the Discus evening. Len Willis will be in charge, and an interesting, informative programme is promissed. There will be, in addition to slides, photograoghs, etc., a tape recording given by aquarists who have bred Discus.

Table Show results 1963

here are the results to date.

Barbs 19/2/63	1...Mr Willis	tiger
	2...Mr Mason	checquer
	3...Mr Dunn	rosy (female)
	4...Mr Mason	rosy

Livebearers 2/4/63

Platies		Mollies	
1...Mr Sellers	marigold	1...Mr Dunn	black lyretail
2...Mr Willis	lemon wag`	2...Mr Iles	perma black (f)
3...Mrs Iles	marigold	3...Mr Preston	permablack (f)
4...Mr Sellers	marigold (f)	4...Mr Preston	permablack (m)

(continued on page 7)

HOW TO BREED TIGER BARBS

by A.J. Mason

Before all you budding breeders read this sad little epistle I suggest you have a bucket or large bowl beside you to cry in.

About three years ago I decided to sally forth and try my luck at breeding a few tropical fish. I had managed to keep a small community aquarium for about a year without fouling it, and I thought I now knew enough to try one of the so-called "easy" ones. Ha, ha! So I chose tiger barbs. After gathering around me all the books I could find about breeding these barbs, I started to read. But, the more I read the more confused I became, for every article on "Tigers" told a different story. So I chucked the lot back on the book-shelf and decided on trial and error as the best method.

I had read in one of the books that using nylon mops was cheaper than using plants;also you could wash the mops out and use them again at a later date. So when you decided to try your luck with some other fish, you did not have to rush out to buy frsh plant.

Armed with all this "know how", I half filled a 16 x8 x8 tank with fresh tap water, put in a couple of wool mops and set the thermostat to give a temperature of 80 degrees (Fahr). The tank was left to stand for about four days, and during this time I went out in search of an adult male tiger. I had what I thought was a good female, apparently full of eggs.

On the fourth day all seemed ready for the great experiment, I placed the pair in the tank last thig at night, prayed, and went to bed. As I had been told that they should spawn at first light in the morning I set the alarm clock for an early rise. So at six o`clock next morning I awoke to a great clanging and rushed downstairs. I peered into the tank and saw?-- nothing. Just two pale tiger barbs panting, nose down, in opposite corners of the tank. So I made a cup of tea, switched on the tank top light, and went back to bed. At a more respectable hour in the morningI once more arose, this time more leisurely. Gloomily I looked again into the tank; the fish were in exactly the same place,still pale, still panting.

I swiped one of my wifes knitting needles and gave the mops a couple of half hearted pokes. To my delight and amazement dozens of tiny, clear eggs could be seen on the wool and some on the bottom. Hurriedly I removed the parents and covered the tank with a dark cloth.

Two days later I removed the cloth and peered into the tank. They were the longest 48 hours I have ever known. But there on the sides were what appeared to be splinters of glass with little black dots at one end. Another three days and I had a nice little shoal of youngsters swimming about the tank.

Now stand by with your bucket. I fed then on drops of "Liiquifry" three times a day but alas they were all dead within two days.

Here endeth the first lesson.

Sadly, number two started about three months ago.I was armed with a little more experience and an even "bigger head" for I had now bred and reared several other types, including cherry and chequer barbs, fighter, and some of the Toothcarps. I thought that I would try again with these so-called "easy Barbs". As I had got as far as the fry stage previously I used the same mixture as before, though of course with a new pair of fish. After a couple of days I again arrived with glass-like fry sticking all over the the wool and glass, so I now had about three days to plan my campaign on feeding the brutes. I decided to use Infusoria tablet and Liquifry, and things seemed to be going very well for the.....

(continued on next page)

first week I reckoned I had won the first round. But (sigh) I made my second bloomer; I tried to rush them along too fast,and after putting them on fine dried food too soon I lost the lot within two days. The moral appears to be "never count your fry until they are at least six weeks old"

I have since spawned Tiger Barbs yet again and tried to rear them on brine shrimp and micro worms after two weeks on infusoria. But out of the sixty fry that hatched I have actually managed to rear only one poor little Barb. By this time I had completely filled up my bucketand I think I had better empty it before it slops all over the floor. But please don`t be put off by my dismal failures.

I expect I shall try again, I`m a glutton for punishment, though perhaps I`ll have more success in raising neons or cardinals.

THE BREEDING OF *Aequidens latifrons* (???-!!!)

by H. Holmes

Aequidens latifrons arre Cichlids and have the characteristic hard and soft rays on the dorsal fin. They have many black bars on a white body, and also have many blue-turquoise spots and markings; the dorsal fin is edged in gold. The sexes are identified by the pointed dorsal fin in the males. Blue Acaras grow to a maximum length of about five inches.

The story begins on the 18th March, when I bought a young pair of Blue Acaras. I beleived, as I was told, they were too young to breed. My fish were about 2½ inches long. I put the fish in a 14 inch long tank with a 25 watt heater and atop light, keeping the temperature at approximately 78 degrees.Because the tank was rather small for the fish I had an aerator ston going. A few plants which I put in were left alone.I started to feed the Acaras on Kit-E-Kat cat food which I was told they would like, also it would bring them into breeding condition. I also fed them tubifex regularly but they didn`t like this as much as the cat food. Now and again I fed them young guppies, which they ate readily. Usually I fed them two or three times a dat.

On the 27th March I noticed that one rock was particularly clean. This was about 7 o`clock in the evening and on further obsevation I noticed that both fish had breeding tubes. Suddenly the female swam, hovering, slowly over the surface of the rock and laid six eggs. The rock was yellow in colour and as the eggs were orange they were not easily seen.. I now saw about thirty eggs on the rock. When she had finished laying some, the male swam over, but instaead of fertilizing them he just ate them. The female laid eggs all evening and he ate the lot. I had read that Blue Acaras were good parents but this was certainly not so with my fish. I took the view that they were too young to look after the eggs.

On the 29th March I cleaned out their tank, putting in new gravel and blue-grey coloured rocks. I wondered if they would spawn again after this disturbance but they did. This time they uprooted the plant and knocked a small rock down on the gravel and cleaned it. Both fish had breeding tubes. They had coloured up remarkably and had covered the rock with eggs. . As sooas I appeared they started eating the eggs again an within an hour had devoured the lot! This time I thought it might have been through disturbance that they had eaten the eggs.

It was not until twelve days later that they spawned again on the 15th of April.They deposited between 500 and 800 eggs in the far corner of the aquarium on the large rock.This time I was careful to make no noise or disturbance near the tank. The tank was situated in the dining room so there was always a certain amount of noise and disturbance around. As they seemed to be looking after the eggs alright I left the fish in with them. On the 16th .....

were still looking after the eggs and I was very pleased to see them taking it in turns to fan and guard the eggs. One fish hovered above the eggs fanning them and then when the other one swam over it took over and kept in the same place as the first fish. This went on for three days but on the third day they were not guarding the eggs and I noticed that they had been eating them. Again all the eggs have been eaten but this time I definaterly think it is caused by a disturbance.

Whether they will breed again and whether the eggs will hatch, only time will tell.

BREEDING *Apistogramma ramirezi*

by D.G.Perrott

I beleive this fish to be the most beautiful of all the Cichlids, and it has many points in it`s favour. It is small ,about two inches at most. It is a peaceful fish and does not tear out plants. The colour of this fish is rather hard to describe, since it varies from blue to mauve, the belly is at times pink, and the eyes red. A black stripe runs from the nape of the neck through the eye down to the lower edge of the gill plate.The sides carry dark vertical bands, which are more pronounced at the head, becoming fainter near the tail. The flanks have scales of shining blue. The dorsal, caudal, and anal fins are orange with blue dots. The first two rays of the dorsal are jet black, the tips are separated and look like the teeth of a comb. *A. Ramirezi* seems to do better in soft slightly acid water.

I have had no little success in breeding this species but it is by no means easy the fish will spawn easily enough, but hatching the eggs is a different story. To date I have had five spawnings; the first, which I left in with the parents, was eaten, and the second and third were removed to bare tanks where the eggs went white and failed to hatch. The fourth spawning was my successfil one. The eggs were laid in a depression in the gravel, and not on the slate as in the previous spawnings. Isiphoned the eggs out into an empty 12" x 9" tank, applied strong aeration, and hoped for the best. Thirty six hours later the first fry were seen lying on the floor of the tank. On the seventh day they were free swimming. It is adviseable to give them a stir with a glass rod just before they are due to become free swimming because , like baby angels, they are inclined to stick together in mass and die. As soon as they become free swimming I give them their first food of newly hatched brine shrimp.The date this spawning took place was 17th January 1963, and twenty youngsters were raised. They are now (in mid April) one inch long and exact replicas of their parents. The young ones are greedy eaters, taking anything from dried food to tubifex, grindal and white worms. I hope in a couple of months time to be spawning these young ones with more success.

I have come to the conclusion that the most important pint when breeding this fish is temperature. About 80 to 85 degrees Fahrenheit seems to be right and this I beleive is where I made my mistake with the second, third, and fith spawnings.

If you wish to breed this colourful cichlid then buy them young, as they are very short lived fish, two years being about their life-span.

THE *Tilapia mossambica*

by C. Bennett

This is anormal cichlid on the whole. It has the typical long dorsal, large scales and big carniverous appetite. Their normal colouring is olive-grey, with four black black bands linked with horizontal bands. The dorsal and at the base of the tail there are a few white dots. The male Tilapia has a more pointed dorsal fin, and is slightly the larger of the two sexex.The fishes finnage is not excessive and apart.....

from the large mouth there is nothing stricking about the. That is, until they come into breeding condition or have just bred, when there is a fantastic chanmge. The male goes jet black with a thick orange stripe around the tail; the gill plate stays white. The female retains her normal colours but looses her black bands. Also, around her mouth and on her nose black dots appear.

I had four Tilapia, of which one female died of a tumour. At first I fed them on garden worms. These I just threw into the tank after the fish had evacuated their intestines. They grabbed the worms at both ends and pulled them apart to eat. For the first few months they were extremely nervous but later I put more rockwork in the tank and fed Tubifex. With this treatment they were soon out in front of the tank.

After a while I thought I would like to breed my fish so I raised the temperature to 80 dgrees Fahr. They all started to dig.. This went on for some time and eventuall I got fed up with this performance. I thought it would do not harm to introduce a large Black Shark.In a week the males were guarding two large holes and trying to lure the female in.. They coloured up as described and fed ravenously. One evening I came home to find they had just spawned, the males still in their brilliant breeding dress. The femalerefused all food for a week, while the males kept their colours, and dug. Then she ate the eggs.

This happened twice more and in each spawning the female ate the eggs after about a week.

The next time they spawned I removed the female after two days to a separate tank. But she devoured the eggs again immediately after being placed in her new home. All this time the males kept their colour and each had a separate hole about one inch deep(and 8" by 4" in area).

Then the tank became covered in algaeand no further obsevations were made for a fortnight. I cleaned out the tank to find the female with eggs again and only the largest male. His companion was visible as a skeleton on the gravel at the rear of the tank.

This surviving pair then spawned again and I recovered the female after she had incubated the eggs foreleven day! This time she ate the fry. I could see them in her mouth before she was moved. The pair were then put in a tank with a bottom filter containing peat to acidify and clean the water. I am hoping that the change of pH will keep them happier, and next time I will move the male and other occupants of the tank. These are the Black Shark and two baby Dempseys. I`ll see what happens.

A FEW COMMENTS ON PLANTS

by M.J.Willis

Do you take an interest in your aquatic plants? By this I mean, are they in your tank because everybody puts them in to show off the fish, or do you plan what to grow.

Many of us naturally have the fish first in mind when we look at our tanks. When we start keeping tropicals we buy certain varieties because we like the look of them, or, maybe, because we have heard some interesting things about them. Plants are very often bought in the same way, though no doubt for a community tank, *Vallisineria*(tisted or staight) or *Saggittaria* takes first place when planting. The others are then just put around in the spare spaces. If this happens, then it may well be that the tank could be made more attractive by having plants that would show the fish off to better advantage.*Vallisineria* unless it is anice solid green wall at the back of the tank, tends to hide the less colourful fish. However, neons may show to better advantage flitting in and out of the glades.

Plants are an interesting and increasingly wide subject. More types of plants appear each year, although admittedly these are predominately *Cryptocorynes*.If we are fortunate.....

enough to have a few tanks it is possible to grow enough plants for your own needs and also a few more besides. At the moment as we have a fish house at our disposal, I have vbeen trying to plan the plant growth, making the best use of the tanks available. What I am at is to get maximum production from each tank. This I hope to do by planting each tank with the variety that I have found grows best in that particular tank. For example, near the light, Twisted *Vallisineria* and in the lowe (and darker tanks), *Cryptocorynes*. Over a period of time it becomes evident will grow well in a given tank, and I have planted over tanks more or less exclusively with that type of plant.

The size of the tank and lighting conditions play a big part as far as actual growth is concerned.Altough it is possible to grow plants in tanks small than 182 x 10" x 10" this is the smallest practical size. It can even be dangerous to use smaller tanks. Recently, by trying to grow something in every tank, I ran into trouble with small tanks. These were planted with small *Cryptocorynes* and had a full commitment of youg platies in each tank. After a while, the combination of unesaten food and the concentration of fish produced foul conditions so rapidly that it was difficult to keep a check. In such conditions the plants soon die and endanger the lives of the fishes.

If you keep one or two tanks. Then very probably growing only one or two types of plants will not appeal to all. Variety is more interesting as a tank of this nature is kept as a show-piece. However, if you keep your tank in the living room you may have trouble growing or even keeping say five or six varieties. Some may die. The suggestion that I put forward is that it is possible to have an attractive set-up with only one type of plant growing. This is not variety perhaps but beauty in simplicity. Our member Jim Wylie for instance had a large vtank in his front room light by strip lighting. In this tank he had the largest and most beautiful specimens of *Cryptocoryne cordata* that I had ever seen. In their natural habitat the plants could not have been much finer. Unusual perhaps but this was an example of a plant being in a tank perfectly suited for it.

In the same way you would not try to keep baby guppies with Angels some plants do not live well with one another. The two types of *Vallisineria* are a good example; they seldom do well together.. In your own tanks you will notice after a period of time which plants prosper and which do not. Water conditions can also play a big part in determining whether growth will be successful or only moderate. This subject is too large to cover now butit is useful to remember that when separating *Cryptocorynes* for further proagation they should be planted in old tank water. This is because the exposed parts of the roots are harmed by fresh tap water.

Finally, floating plants may be kept, either for their attractiveness or because of their value in saving livebearer fry. It is suprising how many livebearer fry can be saved from a community tank with floating plants. But even these plants have their drawbacks. They serve as a trap for decaying uneaten food, they may collect dirt if an aerator is used, and they can cut off much light from the aquarium. The plant should serve its particular purpose only; once it goes beyond this and gets out of hand there is danger.

No appologies are made for this not being a constructive article, it is intended to be just a few comments on plants

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Livebearer Results (continued)

Guppies		**Swordtails**	
1... Mr Stewart	(female)	1...Mr Preston	red
2... Mr Preston	Veiltail golden	2...Mr Perrott	red
3... Mr Preston	Veiltail golden	3...Mr Mason	red Simpson (m)
4... Mr Preston	Veiltail golden	4...Mr Perrott	red (F)

Congratulations to young Ian Stewart on winning the Guppy Class of 10 entries with his fine female.

The complete Livebearer Show totalled over 50 entries.

THE VARIATUS PLATY FROM THE RIO PANUCO SYSTEM

by J.H. Preston

Since it`s introduction into the aquarium world in the early 1930`s, the variatus platy has increased steadily in popularity, and today it ranks amongst our most widely kept livebearers. It is a native of Mexico, and is found chiefly in the Rio Panuco and it`s tributaries. This is further north than the home of it`s closely related neighbour the common maculatus platy. All platies are only found in the rivers of Mexico that flow into the Atlantic Ocean; they are absent from the streams on the western side of the country which empty in the Pacific. The generic name of the platies was changed several years ago from *Platypoecilus* to *Xiphophorus* because in the light of moden knowledge it was considered that there was no longer justification for for including Swordtails and Platies in separate genera. So the scientific name of the variatus platy is now *Xiphophorus variatus.*

From the aquarists point of view, the variatus is in many ways an ideal fish. It is a livebeaer, one of the most popular groups of aquarium fishes. It is hardy, peaceful, colourful, and its maximum size of between 2 and 3 inches is most right for most community collections. The variatus is not unduly fussy about water conditions or temperature, although it should not be kept for long periods over 80 degrees F. At the other end of the scale, it has been reorted that the species can withstand a temperature as low as 50 degrees F. Of course it be unwise to suddenly subject these fish to these low ranges if they had been bred and maintained for several generations at a constant, steady 78 to 80 degrees F. (say).Feding the adult variatus presents no problems as nearly all foods are readily taken. A certain amount of vegetable matter should be included in the diet however. "Bemax" provided it is not fed more than about three times weekly is excellant. It is suprising how mant items from the kitchen may be utilised as fish food, for example, raw meat scraping, peas, tiny pieces of scrambled egg or boiled fish. I feed tubifex worms to my variatus once weekly and have never yet observed any ill effects; I take care however, that the worms are clean and fresh.

The young platy variatus are a dull brown colour, and it is unfortuneatly that the adult colour develop very slowly and in some specimens the colours never become spectacular. Most females remain on the dull side although some may develope a yellow dorsal and redcaudal fins. Some of the newer tank raised strains have females with a fair amount of colour too. Males colouration varies greatly, but in the origal wild imported stock there was a tendency towards two distinct types – the yellows and the blues. The yellows normally had a bright canary yellow dorsal and a red tail, and the basic body colour was yellow. The blues had a distinct blue sheen on the body and both dorsal and caudal fins were yellow. Fish approximating to these types are common today, and there are endless intermediate variations. The body is overlaid with yellow, blue, green, red or mauve markings the more the better. Inexperience aquarists are often baffled by what appears to be a "gravid spot" in the male. Many males do show a dark green-blue patch in the region of the gravid spot, and practically all females exhibit a gravid spot typical of livebearers whether they are carrying young or not. In pregnant females the spot enlarges considerably when birth is imminent. The corect way to sex these fish is by the anal fin which in the female is rounded and fan shaped, and in the male forms the spike-like gonopodium. In addition to the basic body colours there are several markings in black that may or may not be present in both sexes. Probably the commonest is the "twin spot" or "split crescent" marking , appearing as as two large black spots, one at thwe top and one at the bottom of the caudal peduncle. Some fish possess a complete crescent marking- this may be sex-linked as I cannot recall ever seeing it on a male fish. A third common trait is the prescence of small black spots on the body, usually in the dorsal area. I would expect these black marking are inherited as dominant traits in accordance with Mendelian Principals; I hope to have the opportunity to find out by breeding experiments.

TO BE CONTINUED

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AQUARIST SOCIETY

SUMMER 1963

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SECRETARY D.A.Booth, 18 Hamstel Road, Southend-On-Sea

EDITORIAL

Dear Readers

The following extract is taken from the "Water Life" Magazine for June 1948

"In April the Southend, Leigh and District AquaristSociety published tlie first edition of their Members Monthly Journal. This is an enlarged edition of the monthly newsletter that has been published for some time. A 90% attendence was recorded at an Auction sale arranged by the Society on April the 7th and Apri lthe 25th members visited Messrs Cura`s fish hatcheries. In May the Society held a "Field Day" on the 9th and a table show on the 12th" .

Alas there is insufficient support in the society at the present tine for a monthly journal, though it should not be beyond us to produce one four times a year, but it is interesting to read of the activities of fifteen years ago, and of the begginings of this magazine. Evidently auction sales were just as popular in those days as they are now!

On:of the major events of the year, as far as this club is concerned, is now only a short time ahead - this of course is the Town Show.. Many of you will remember the excellant display we put on last year; if this success is to be repeated this tine it willmean a great deal of work for a few days around mid-August. May I appeal to as many members as possible to lend a hand; and to those of you who are entering furnished aquaria,start planning your tank now to put on a really attractive display.

The EDITOR

World of the Aquarist today

by L.E. Willis

I have information before me of the american Killifish Association, which was organised about 18 months ago.

The A.K.A. Is an organisation deling exclisively with fish fish species of the CYPRINODONTIDAE, commonly know as egglaying tooth-carps.Until this year membership was Americans and Canadians only. However, now membership is opened to embrace aquarists all over the world.

The yearly subscription is 5 dollars (about 35/-) and this includes a monthly newsletter and Quarterly Magazine, which is up to professional standards. In the newsletter members list species that they want or have available, and in this manner they are able to trade species and build a collection of killis, even the most rare species, at small cost.Almost every species know to science is available to members through this egg exchange . Members have successfully air mailed eggs and even fish all over the world.

The Association also has a committee for research into fish diseases and their cures, fish propagation, egg distribution(in order to keep species going rather than let then die out in certain areas), help for begginners, fish photography, and even a committee for importing new species. Last year members imported two species new to science from Columbia, South America: *Rachovia splendens* and *Austrofundulus myersi*, and they are being exchanged now.

Many of these Tooth-carps or Top Minnows as they are sometimes known are brilliantly coloured breed readily, can be maintained for show or breeding comfortably in a small furnished tank - say 18" x 10" x 10".

I shall be happy to give further details to anyone interested in membership.

Many of us remember Mr Fred Austen who always used to keep a wide range of good tropicals in his shop and had quite an extensive experience in breeding. I had the oppertunity of visiting him and his wife at Soldrdge Nursery in Alton, Hampshire+. He has an extensive nursery and apart from the usual bedding plants, has Pelgoniums, Geraniums and fuchsias. Fred really specialises in fuchsias and has 150 different variaties including the latest American types. He advertises in the "Southend Standard " from time to time and I gather his prices are keen and attractive.

He still maintains his interest in fish and built himself a first class fish house about 14 foot by 12 foot, I suppose. Two thirds of it is set out with tanks. Most dissappointingly his great problem is water, which runs at a hardness of 36 Clarks. Plants simply refuse to grow in water as hard and breeding egglayers is almost impossible. Another extraordinary thing is that nowhere are there any ponds with daphnia nor will it flourish if seeded in the water there.It is only when you hear of these thing that you realise how well we are pleaced here in Southend.Fred Austen runs Lyre tail Mollies and various other livebearers and has quite a few tanks going despite the difficulties. For live food

he receives supplies of tubifex by rail.

CLUB NEWS

The meeting on May 7th ,which was the Inter-Club tableshow with Grays- Thurrock A/S, got off to a rather chaotic start as the decorators had left the Liberal Hall in a decidedly topsy-turvy state. The show attracted a combined entry of 51 fishes from both clubs, and classes were arranged for Characins, Barbs, Platies, Guppies and Mollies, and swordtails. Mr Willis took first and second with two fine platies, Mr Dunn won the guppy/Mollie class, and a red swordtail owned by your editor proved the best in it`s section: but this was a bout the limit of Southend`s success, and Grays were winners by 28 points to 22. (The pointing system here was 1st 4 points, 2nd 3 points, 3rd 2 poits, & 4th 1 point).

May 21st was the Discus evening. Although no *Symphysodon* were able to be present, 24 Southend members turned up, and also a few of our friends from the Romford club. The second half of the eevenings programme was billed as "Breeding & Rearing Toothcarps";however, this had to be held over to a later date. There is news elsewhere in this issue which may interest Toothcarp enthusuasts.

I had the effrontery to take aweeks holiday in early June, so I was not present at the June 4th meeting, which was an auction sale. The attendence of 25 was nethertheless the highest so far this year (apart from May 7th when Grays were visiting). Michael Willis took over as auctioneer, and as is usual on these occassions many bargains were to be had.

June the 18th was a diddappointment,for not only was the attendence of 16 the lowest for two months, but the total number of entries for the Labyrinth, Rasbora, and White Cloud table show was EIGHT FISH only! Lets hope there is better support for the Characin show tonight (July 16th)

Results were:-

1. D. Perrott.....Kissing Gourami
2. J. Mason.....Harlequin
3. D. Perrott.....Blue fighter
4. D. Perrott.....Leeri gourami

Well done Dave! There were no W.C.M.M.`s and only one Rasbora (the Harlequin)

A talk recorded on tape by Max Gibbs of the "Goldfish Bowl" Oxford was a feature of the Tropical Marine programme for July 2nd . Mr Gibbs spoke of his experiences in keeping tropical marine fishes, and said that he found artificial sea water to be better than natural sea water, for fish kept in the latter often fell prey to disease. Bird sand was used on the bottom of his tanks instead of gravel. And aeration and filtration were found to be essential. The hydrometer must be checked to ensure that the density was correct, i.e between 1.025 and 1.028. no metals must come in contact with the "sea" water. All corals, etc, used for decoration must be wll boiled before use for up to one hour. The temperature range for tropical marine tanks was the normal 74-78 deg. Fahr. And most ordinary live foods were suitable for the fish, white wworm being especially recommended. Mr Gibbs reminded us that not all marine fish mixed well, and he discouraged us from keeping Sea Horses until.....

some experience has been gained. The various clown Fish were best foe a start, being hardy and inexpensive. The main marine disease encountered was Oodinium, for the treatment of marine white spot heat seemed the best remedt. A book was recommended for those interested in marine aquarium keeping, entitled " The Saltwater Aquarium in the Home" by Robert. P.L. Straughan. Before the close of the meeting, len Willis showed ussome colour slides of the brilliant corals and fishes of the Barrier Reef, off the australian coast.

Outing May 26th A total of some fourty people, made up of members their families and friends enjoyed the first outing of the year, to the London Zoo. The day was a great sucess,partly due to the excellant weather, for the organisers had done a good job in picking one of the few fine days we have had during the last couple of months.

The departure from the "White Horse" was a mere six minutes after the scheduled time of 10.00 a.m., and as everyone was up in good time noe further delays were encountered. A halt was made at Romford, first to pick up the last two members of the party, and then immediately afterwards for refreshment.

We arrived in London in good time, and settled down for a picnic lunch in Regents Park. It was here that everyone found to their cost that the grass was still suprisingly damp from the previous Thursday`s rain. Shortly afterwards we were let loose in the Zoo., until at 3 p.m. Came the long awaited visit to the Aquarium. The time permitted behind the scenes was all too brief; my own most vivid memory is of the giant carp (some near 50 lbs). In their equally mamoth tank, noisily devouring cubesd of meat from the hands of their keeper. I wonder how many other noticed, as i did, the tank labelled "Mosquito fish that contained not the more familiar *Heterndria formosa* but a couple of specimens of *Gambusia(Gambusia* is a species of livebearer that occurs widely in the Southern states of the USA, but is seldom seen in this country. A special display of Medditerranean wild life was laid on for us, and we were also shown the Archer Fish being fed with flies,(The fish capture the flies by spitting drops of water at them, and remarkable accurate they are too.). Perhaps the best looking tank in the whole Aquarium was that containing a shoal of Nigger Barbs , all the males in full col;our.

There was, of cours, plenty to see in the Zoo besides the Aquarium, and all too soon it was time to make our way back to the coach for the journey home. A halt wasc again made art Romford. And Southend was reached some time after 8 p.m.. Mr Bonner won the raffle which was held on the coach on the return journey.

Kingfisheries Outing No 2 July 21st

Plenty of seats are still available on the coach trip to this well known fish and plant establishment next Sunday., July 21st . The fare is expected to be 12/-6 and the departure times are likely to be the same as for the previous outing, i.e. Starting at 10.00 a.m. From the "White horse" Southchurch.

The club has visited "Kingfisheries" before and the trip proved well worth it. A genuine discount of up to 25% is offered on items purchased there.

Club Badges

After a long delay, a further supply of Southend aquarist Society badges has become available. The design is similar to the old badges which some of the older members will remember, with the familiar Black Widow on a green background.

Badges may now be purchased, price 4/6d each.

Journal Price Increase

You will no doubt have noticed that the price of this magazine has been raised to 6d.The committee were reluctant to take this step, but the cost of production today is so high that the previous price of 3d was insufficient by far to prevent a considerable loss on the venture.

Town Show

The Southend Town Show takes place this year on 16th 17th and 18th of August, in Southchurch Park East. Our Society is to put on a display along similar lines to last years, i.e. Furnished aquaria and a few other exhibits. A great deal of work is needed to put on even such a modest disply as this, and any help YOU can give will be much appreciated by the Show Committee.

Furnished Aquaria classes will be limited to 4 entries in the 24 x12 x 12 Tropical Class and 8 entries in the 18 x 10 x 10 Tropical Class. It is hoped there will be enough interest to form a 24 x 12 x 12 Coldwater section.

Next Magazine

Don`t forget to send your copyin so that the next issue can roll of the presses in good time. The provisional date for the appearance of the Autumn number is October 15th .

New Tropical Aquarium Plant?

By J.H. Preston

Some plants received in a recent import were supposed to be a type of lily; however, they had a most unlike-lily appearance. The few cuttings received were in poor shape, but planted in a tank which received plenty ofnatural light, they made rapid growth.

The plantbears a resmblance to *Aponogeton* in that its leaves have a crinkled edges, but they are borne alternately on indidual stems. Reproduction is both by cuttings and runners. Many insignificent flowers have been produced, enabling the plant to be identified by the Royal Botanic Gardens, Kew, as *Potomageton nodesus* POIR.

Potomageton is quite a large and common genus of aquatic plants, although I beleive this to be a new species to most aquarists. It is certainly decorative, with it`s bright green leaves which sometimes present a lace-like appearance, and may turn to a redish shade under certain conditions; the plant`s fast rate of growth and large size attained may possibly prevent it becoming really popular however.

SPAWNING(???) of UNIDENTIFIED SHARKS

by C. Bennett

I bought a trio of these fish from a well-known Southchurch dealer; between three and five inches long. The colouring was golden with red fins and also rows of black dots along the sides which turned to red around the head. The only apparent difference between the sexes was the plumpness and larger size of the female.

Recently I notice some strange behavior in my Sharks. They became very active and their colours became intense. Then one morning I noticed a pair dashing madly around the tank. After a while they stopped and gave a sort of mock battle. Next they assumed a side by side position (head to head) and quivered for a few minutes; they also did this head to tail, like *Labeo bicolor*. About a week later the fishes repeated this behavior and also locked jaws as the cichlids do before mating.

In both these instances no eggs were seen although there was no plant in the tank. (No wonder, for they demolished a Giant Sagittaria in a day !). Comments are invited.

CICHLIDS

by C. Bennett

The family Cichlidae is one of the largest groups of freshwater tropical kept today. It is split into Genera (groups of closely related species), of which the following are the main ones:- *Aeqidens, Cichlasoma, Tilapia, Apistogramma, Nanacara, Haplochromis, Pterophyllum, Sumphysodon, Astronotus, Geophagus, Etroplus, Chromicichla, Pelmatochromis* and *Hemichromis*.

In size cichlids vary in size from the 1½ inches of the ramirezi to the 12 inches of the Marble cichlid. They also vary in temperament from the peaceful discus or Pompador fish to the more robust Jack Dempsey or the deadly Jewel Fish.

The reasons that most people do not keep cichlids are that they rip up plants and kill small fish. Both these staements are true up to a point. But most people keep Angel fish although no baby fish or small one is safe from them when they grow big. I have Blue Acara which have never attacked plants except when spawning.

The breeding of Cichlids is in most cases extremely interesting; all guard the eggs and fry and in the case of the Pompador even feed the youngsters. Alas whenguarding eggs and fry they are killers- my pair of Acaras spawned and because of shortage of tank space I had to keep several other fish with them. These ended up with ripped fins and missing scales and also a blue Acara died.

Most cichlids spawn on rocks or holes dug in the gravel, but many.....

dwarf ones hoever need caves or upturned flower-pots. Another type is the Mouth brooderswhich carry the eggs and young in the mouth until they can care for themselves. The exceptions to the general rules of cichlid breeding are the Angel fish and Pompador. These spawn on leaves baboo or slate.

The colouring of most Cichlids is superb-- consider the Firemouth, Dempsey, Pompador, Kribensis, and Ramirezi. They also change colour with age and mood, and have colours of fear and aggressiveness, also courting colours.

I find cichlids to be the most interesting and intelligent of all the fish that I have ever kept.

THE VARIATUS PLATY FROM THE RIO PANUCO SYSTEM

by J. H. Preston

(continued from Spring Issue)

Firstly I must correct a false impression I gave towards the end of the Spring article. Since I wrote that I have watched a brood of crescent-marked variatus growing up, and several have sexed out into males. So the crescent marking is obviously not sex linked.

My suggested method of breeding platy variatus is as follows. The parent fish should be not less than six months old, and a year is better. Females should be virgins. Only one pairmay be used, but if many youngsters are desired, use one or two males and several females. The breeding fish must of course be in first class condition; they should be left together for three weeks, with no fish of a similar type in the same aquarium , and after this period all the females should be gravid. It is besat to place each female in a separate container to drop their young, which usually takes place 4 to 6 weeks after fertilization. A well planted tank is the best method of saving the babies; provided a careful watch is kept to see when they appear, losses will be small. The female is best removed immediately after the birth, and feeding of the fry commenced. Although fine dry food will be taken if good growth is desired however, generous amounts of brine shrimp are needed, together with some micro-worm and perhaps liquid fry foods. If small daphnia are available, so much the better. After 7 to 10 days, the fry shoul be taking Grindal worm, and growth should be quite rapid. As maturity is approached an adult diet may be gradually substituted. I reccomend segregation of the sexes from the earliest possible dateas if this is not done, not only will the fish stay small but there will be every opprtunity for brothers and sisters toninbreed at an early age. This is most undesireable and is likely to produce only runts.

Xiphophorus variatus will produce hybrids with all ther members of the genus, and the results of such matingsare always somewhat unpredictable. The so called Black Variatus platy has recently been available in Southend; this looks as though it was produced by crossing the variatus with the black platy. I do not know the origin of the Marigold platy, but I strongly suspect that it is a hybrid, from my observation broods of Marigolds contain an unaturally high proportion of males. Although there are undoubtedly possiblities for further new types to be developed, such work is best left to experts who have plentyof time, patience, and lots of tank space.

BADIS BADIS

by D.M. Cheswright

This interesting fish belongs to the genus of perches originating in India and Indo-China. It grows to about three inchesin length and presents some unusual features. Once Badis reach about 2 inches in length at about nine months, they are extremely easy to sex; the male having larger and more pointed fins than the female and also being able to carry out suprising changes of colour within a few seconds. Whereas the colouring of the female consists of a dark greyish background with black edging to the scales aand is subject to only varying degrees of intensity, the male normally sport a grey or brown background with scales edged in red or blue. In addition the lateral line of the males often appears as a line of closely placed red spots. The finage of the male is usually light blue but when in breeding condition it becomes very dark blue, in fact almost black. When in breeding condition the male`s body colour changes from drabness to brilliance, the fish becoming darker and darker blue until appearing black.

Anothe peculiarity of this species is that it will often lie on it`s side or back on the bottom of the tank or when placed in a jar. This appears to be some form of defence tactic as I have never found a fish in this position to be out of condition in any way.

Badis are quite peaceful although when young they tend to nip each others fins if overcrowded. They are not at all keen on dried food and much prefer tubifex to any other live food. It is because of this feeding problem that they are best kept apart from other species, when they will also display their colouring to full advantage.

They are content in a temperature of 70 85°F (21 to 30°C) and for breeding purposes 75 to 80°F (25 to 28°C) is most suitable. Spawning is an easy matter an an 18 to 24 inch tank is the best size to use. Larger sizes are not necessary, but in smaller tank the fry tend to be overcrowded and fin nipping results. Even when young each Badis takes over an area of the bottom of the tank as it`s domain, chasing off intruders; hence with many fry in a small tank fin nipping results.

Tap water which has stood for a week or so is suitable for breeding purposes. The tank should be set up with about 6 inches of water, one or two nylon mops or bunches of plants, and a two to three inch flower pot. The mops or plants are to provide rfuge for the female and it is in the pot that the eggs will be laid. The flower pot should be placed on its side with the mouth facing the front of the tankwhere it will be easy to watch the spawning take place and, subsequently , the male tending the eggs and fry.The pair areintroduce together, having been well fed over a period to bring them into condition. The male will immediately yake charge of the flower pot commencing to clean the inside surface. Wirthin 1 to 3 days spawning will take palce, some 100 to 500 eggsbeing laid inside the pot. Usually the eggs are deposited on the lower surface of the pot but on occassions the upper inside surface will be chosen. The pair taking an uopside down position when spawning. After spawning it is best to remove the female as it is the.....

male alone who tends the eggs.. He remains in the pot and continuosly fan the eggs until they hatch. After about 48 hours, and then the fry until they leave the pot 1 to 2 days after hatching. On leaving the pot the fry hang onto the sides and bottom of the tank until free swimming, about 4 days after hatching. The male takes no further interest in the fry after they have left the pot and he reverts to his normal colouring and is best removed from the tank.

The free swimming fry must be fed on onfusoria or green water for about a week then they should be big enough to take brine shrimp or micro worms. They will as they grow require chopped tubifex the size of which must be increased as the fry grow. Growth is extremely slow and patience is required to bring up the fry. They take about 4 months to reach a size of one inch and a further 4 to 5 months before they are large enough to sex and for the male to display the colour changes decribed above.

THE FURNISHED AQUARIUM

The following article first appeared in the February 1953 SLADAS Monthly Journal and is an account of a talk given to the club by Mr P. Blomfield on January 20th of that year.

This last observation brought the speaker to the subject of "The Furnished Aquarium" from a competitive point of view, and it was shown how a tank was judged, with the actual marks allotted to the various headings under which judgement is given.

Fishes (25)	Size	8 points
	Quality	12 poits
	Selection	5 points
Plants (25)	Selection	10 points
	Quality	15 points
Design (25)	Permanency	5 points
	Originality	10 points
	Realism	5 points
	Harmony	5 points
Technique (25)	Planting	8 points
	Rockwork	7 points
	Clarity	5 points
	Compost	5 points

On the subject of fishes it was thought that these would be in accordance with show standards; they should therefore be adult, as large as possible, in perfect condition and well matched as to species and sizes. Whilst some judges seemed to favour the use of one species only in a tank, Mr Blomfield considered it better to use different types to give harmonius colour contrasts and to avoid having all the fishes swimming at one level in the tank. The use of.....

fishes which would obviously not live together, or the mixing of different species of livebearers (which could hybridise) was to be deplored and would loose marks on the score of selection.

Plants must obviously be in first class condition, free from algae and deformed and dead leaves, and six or seven different ypes was considered ideal- more than this was apt to give a "bitty" look, whilst at least this number of different types was essential to add interest to the design as well as to give some variation in colour..

Permancy in design is taken to mean that the tank should convey the feeling that the arrangement will maintain it`s appearance for some considerable time. And not quickly become overgrown and lose it`s original layout.

Originality must obviously warrant high marks, as there seems to be a limit in the number of ways in which such a restricted space can be "decorated",and it is most creditable when really different is produced: in striving for originality however, care should be taken to avoid anything too stricking or garisg- the instance quoted of a tank containing rockwork in the form of a brickworkwall (President`s own comment- "looked like a static water tank".

Realism – a term which seemed to provide some difficulty of interpretation – was taken to mean an approach to the natural; the speaker said he would give marks where the types of fishes and ?or plants from the same natural habitat were used.

Harmony was naturally the blending of both apes and colours in the aquarium- the shapes by reason of the clumps of plants with their varying greens, and the colours of both the plants and fishes, which should provide an overall colour scheme and at the same time provide a contrast of tones which makes for interest and attractiveness.

In the matter of techique the most points were awarded for method of planting and rockwork. Planting must be done to give the appearance that the plants are not only actually growing but have been in the same position for some time.- this can hardly be acheived if roots are left waving about above the compost, or if lumps of lead are in evidence, also plants must be positioned in the normal growing attitude taken up by the particular species e.g. *Vallisineria* with it`s crown just showing at the surface of the gravel; plants naturally grow in groves or clumps- so keep them that way to achieve a natural as well as artistic effect.

Rocks, where they are used, must have a natural appearence – heavy penalties are incurred for sharp edges- and traces of algae here do add to the effect; of course one should avoid limestones, marbles, etc., in fact any "soft" looking rock would be likely to make the judge suspiciousand incur his or her displeasure; in arranging rockwork care should be taken to choose pieces of a size in keeping with the volume of the tank, and to arrange any strata lines to run in the same direction. Complete absence of rocks will not be penalised provided that, in the judges oppinion actual design of the tank was.....

effective without them.

Compost should be of a type that will encourage plant growth, i.e. sufficiently coarse so as to allow mulmto work done to the roots but not too coarse as to allow particles of food to lodge among the pieces and lead to putrefaction and ultimate fouling of the water; some effort should be made to match compost to rockwork but in the case of say Red sandstone the too closely matched colour of the rocks and compost (red sand) would tend to give a too overpowering effect of red.

Of clarity all one can say is that the gravel and glass (inside and out) must be absolutely clean;gravel can only be brought to this state by very patient and thoropugh washing in small quantities aty a time.

A vote of thanks was passed to Mr Blomfield for his excellant lecture.

The DANGERS OF HARD WATER

by A.J. Mason

This is another sad tale about a batch of young Cherry Barbs that I nearly raised.

I had successfully spawned and raised to six weeks a nice little shoal of 30 to 40 Cherries, and I started to look around for tank space to grow them on. So I twisted my wife`s arm a little and obtained permission to instal another tank in the kitchenette. A 10" x 10" x 30" fitted nicely on a shelf I had my eye on for some time.

After completion,the tank was quickly installed in case the govenor changed her mind.

I had some old gravel given to me by a friend, so this was used after thorough washing and boiling. The tank was set up with half old tank water and half fresh tap water, and after a week I out some young Simpson Swordtails in. These after another week seemed happy and quite at home. About this time I saw a nice piece of rock in a local dealers, so into the tank it went.

Some three days later I noticed the sword beginning to close their fins, so thinking that the too new water disagreed with them I fished them out and returned them to their old quarters. I knew that young Cherries di not mind newish water, so foolishly I put them all in the new tank. But I should have tried just a few at first, for next morning only one was alive, and that one on his last legs!

Too late I started to look for other faults in the tank. I took water into work for testing.

What a shock! The pH was O.K. (7.2) but the hardness was 290 ppm. The trouble was obvious, but what was the cause? I suspected the rock but to make sure, I filled two plastic buckets with freshwater, placing the rock in one and the gravel in the other. A test 10 days later revealed the cause: water with rock 120 ppm, water with gravel 260 ppm.

My friend did not know if anything was wrong with the gravel but all I know is that I am 30 or 40 barbs down the pan, and a little wiser. I shall test water before, and not after, the proverbial horse has bolted.

SOUTHEND, LEIGH & DISTRICT

AQUARIST SOCIETY

AUTUMN 1963

QUARTERLY MAGAZINE

THE SOUTHEND, LEIGH & DISTRICT AQUARIST SOCIETY

QUARTERLY MAGAZINE
AUTUMN 1963

The society meets at 8.00 p.m., on the first and third Tuesday in each month at:-

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Southend-on-Sea,

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PRESIDENT'S MESSAGE

It has been brought to my notice that as President, I am supposed to write a short letter in this Journal, so here we go.

In this my first little epitaph I must first apologise to our old (sorry Jim) young friend Jim Wylie for nearly poisoning him with my last effort in tea-making. For the information of those who make the tea at a later date, Jin likes liis tea made without tea. leaves.

While tea is the subject, I would like to thank Mrs Iles for her steadfast effort in making tea and providing a service that is second to none. But it would be nice to see someone give her a break just oiice in a v/hile.

The Club's Annual General Meeting will soon be here once again bringing us to the end of another year, quite a successful one as far as this club is concerned, with about fourteen new members. Now is the time. for you all to get your heads together and think out what you would like to see in next year's Programme. Suggestions vfould be very welcome.

Finally I should like to offer what amounts to a small prayer for myself :-

May all our meetings go with the smoothness of silk,
May the entries of all our table shows be big ones,
May all our members make on effort to attend all our meetings,
May the President keep his temper and try not to be sarky,
And may there be plenty of volunteers to make the tea,

A.J. Mason (-PRESIDENT)

Tonight (15th October) we vri.ll hear extracts from a tape talk "Environment and Feeding":; by :Henry Roth, U.S.A. The folio-wing tapcs also be hired from the Federation of Guppy Breeders Societies:-

	Time	Title	Author
No 3	30 mins.	Breeding Albino Guppics	W. G.Phillips,F,F.G..B.S.
No.4	30 mins	Visit to University College- Comnents on Fatherless Guppies and research being done there.	W, G,Phillips, F.F G.B. S.
No 6	30 mins,	Feeding Colour to Guppicc	A. J.Holloway.F.F.G..B.S.
No.7	30 mins.	The Breeder Classes ' ..	R.A..Alley. ,Esq,
No 8	65 mins.	The Guppy under the Microscope	R.Forest-Jones, B,Sc.
No.9	30 mins,	Vitanins and the Guppy Diet	E.S,Roach, F.F.G-B.S,
No.10	45 mins.	Heredity Without Tears	Dr. C.W,D. Cole,

If members arc interested in hearing any of these tapes, will they please contact any member of the Committee..

CLUB NEWS.

The meeting on July 16th attracted 16 members. The start vwas delayed by some 35 minutes by the late arrival of some members, and also by the need to confirm arrangements for the outing on the following Sunday,
Eventually proceedings did get under way, and Messrs Mason and Preston attempted to give a demonstration, complete with running commentary, on the art of; setting up furnished aquaria, the emphasis being on tanks set up for short periods as at the Town Show. The 17" x 10"x 12" tank had already been provided with gravel of questionable cleanliness, and filled with water which was in consequence sadly cloudy, Rocks were selected from the stockpile on the table and placed in the tank. The Editor began planting, and Johnny Mason remarked that some people were very handy at using planting sticks. At this, Howard immediately produced a pair as if. from nowhere and began scratching around in the gravel with them. He was socn in trouble however and claims to have discovered a :type of *Vallisneria* which is definitely a floating plant!

Before the tea interval, the tank had been boautifully(?) filled with Vallis. (both types), Najas, Hair Grass, Hygrophila (small and Giant), Myriophyllun, Pygmy Sword and Ambulia.
During this time, Messrs Cheswright, Porrott and M.Willis had been judging the Characin Table Show at the other end of the Hall. The entry of 15 fish was good considering the attendance, and the standard was quite high. There was a complete absence of Neons and Cardinals; Gold Tetras were well in evidence, though not among the the first four,

- **Results:-**

1 No.l Mr Willis Pulcher.
2. No 3 Mr Willis Heterohabdus
3. No.7 Mr Perrott Penguin
4. No 10 Mr Mason Silver Hatchet
5.

During Tea, copies of the Summer Magazine wore sold. One member noting the number of different colours of covers available, suggested that it be renamed the "Rainbow Journal". The demonstration furnished tank was the subject of much attention - it even had a few young Platies swimming around in it - but it was the plants which were tho main attraction, for the Town Show was only 4 weeks distant

Later in tho evening, it was intended to further discuss the tank, but it did not last that long, for eager hands had stripped it of practically all its plant. So the raffle was drawn, the winners being:

1: Ticket 283, Ilr Bonner Brilliant Danios.
2. Ticket 260, Mr Bennett Midnight Hollies,
3.

and the meeting drew to a close at about 10.15 p.m.

§§$§§§§§§§§§

The last meeting before the Tovm Shov; was the Bring and Buy on August 6th. This got under way at 8.25 p.m. and the President, assisted .....

by Brian Bonner, knocked down sone 30 lots. The prices raised were in most cases ridiculously low; for example, adult Swordtails and Platies at 3d oach, and Vallisnaria fetching a similar figure. But 58/9d was raised for Club Funds before the Tea Brock at 9,30p,m,

After a 20-minute adjournment, the raffle was drawn. Thoprizo of 3 young Tiger Barbs was won by Mr Maehin with ticket No.309. The 21 members present spent the rest of the evening discussing the Town Show, and helpers were asked for at the Show Ground on the Wedncsday and Thursday of the following week.
Mr Mason declared the meeting closed at 10.15 p.m.

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The Southend Town Show is reported elsewhere in this issue

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So to August 20th, when the Programme Card read "Plant Table Show - Algae Causes and Cures". 24 members turned up, of this total, 9 were new members enrolled at the Town Show. 2 of the ncwcomors, juniors Ian Lake and Keith Ollett, live as far away as Springfield, Chelmsford, We hope the journey will not prevent us from seeing lots more of them in future.
For the Plant Table Show there wcro 25 entries. This permitted a division into 4 classes; the Judges wcro Messrs Mason, Perrott and L, Willis. Results were:-

Class 1, Grasses.

1 No,4 Twisted Vallisneria	Mr Perrott,	
2. No.15 " "	Mr L. Willis.	(How did judges take the first 3 places ??)
3. No.10 Giant Sagittaria	Mr Perrott.	
4. No.18 Twisted Vallisnoria	Mr Sellars.	

Class 2. Cryptooorynoa & Aponogetons

1, No. 23 Apongeton Undulatum	Mr Perrott.
2. No.8 Crypt, hartelliana (?)"	Mr Perrott.
3; No.25 Aponogoton crispus	Mr Booth
4. No.14 Crypt, hartelliana	Mr L,Willis

Class 3. Fine leaved Plants.

1 ; No. 21 Cabomba	Mr Sollars
2. No.6 Myriopliyllun	Harvey Holmes
3. No.l6.Ambulia	Mr Plappert
4. No.7 American Myriophylltin	Mr Perrott

Class 4. Bog Plants,

1. No.19 Ludwigia	Mr Sellers
2. No.9 Hygrophila polysperma	Mr Perrott
3. No 2 Giant "Hygrophila"	Mr Mason
4. No,24 Dwarf Rush (Acorus)	Mr Wylie

The meeting had been opened by Johnny Mason at 8,17 p.m., who without delay handed over to Michael Willis for the talk on algae.
The speaker began by describing some of the commoner types of algae encountered by aquarists, such ac Blanket weed, Brown and Blue-green varieties, Green Watcr, Green grovrths on the tank glass, and short growths on such plantc as Twisted Vallisnaria* Excess light in combination with a lack of suficient healthy plants provided the best possible environment for algae, and once it became established,.....

it was very hard to eradicate completely.

Another reccommended by Mr Willis to combat green water was to provide, or increase, aeration to keep the water moving; while at the some tine it was im,portant to gett tlie plants growing well. The filamentous algae known as blanket weed. This was far more troublesome. This may be introduced to an aquarium as just a. single spore, and it could only be kept in check: by removing it by hand. Blue-green algae should be wiped or scraped from the plants or tank and then siphoned off; several treatments be necessary., Brown algaeusually thrived where there was no tenough light for the higher plants, and the remedy here was obvious,

All through his talk:,Mr Willis emphasised the inportance of trying to discourage algae by having a vigorous grovrth of the higher plants. He did not reccormend the use o£ cheriicals in algae control because of likely side-effects on plants and fish. Acid water helped to keep algae down, but the majority of tanks soon became alkaline under normal conditions.

One very useful form of algae was Eaglena. this was an excellent fry food considerably smaller than infusoria. It could be cultured by adding one teaspoonful of Berax: to 2 pints of hot or boiling water; the resulting liquid was left to stand for a week and then the culture of Euglena added. (In appearance, Euglena resembles green water.)
Before the break for tea at 9,20 p.m., Mr Willis answered a number of questions put to him by members of the audience.
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A vacancy had arisen on the committee, and this was filled by Brian Martin..
Mr Barker won the raffle (4 Red Platies) with, ticlcet No. 299.
Before the meeting closed at 10.25 p.m. some of the plants from the table show were donated to the Club for Auction; as a result, Club funds were swelled by 18/3d',

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On September 3rd . we welconed our old friend and supporter, past President and Secretary, and one of the founder members of the Club, Horace Giles. It is pleasing to record thai this coincided with the highest attendance so far of tho year, 27. The Vice -President, Mr L. Willis, opened the meeting at 8.20 p.m., and introduced Mr Giles, who was of course the Judge at our section of the Town Show.
Mr Giles gave us a mostt interesting talk for 45 minutes. He praised the excellent display which had been put on by the Club, and commented favourably on the large nuuber of furnished tanks which had been entered. It brought back memories of his past experiences in the Club, when with a far greater membership, there had been difficulty in raising even half that munber of entries in the Annual Shows of those days.
Horace then went on to tell us of some of the faults he had found in the Town Show tanks. Many of the tanks, he said, were lacking in clarity he suggested that members' wives should be made to do the gravel washing! Another common fault was the mixing of fish of different sizes; more than one tank was marred by the presence of large Swordtails in with smaller types. One member had stuck a large lump of sandstone in the front of his tank, hiding too few; plants..

Said Horace. "It looked like a grave". 2 exhibitors seemed to have committed the sin of using invisible fish { this variety of course comes out of hiding only in the absence of Judges). One tank: had a sheet of glass right across it, and yours truly the Editor was under fire for having as many as 10 varieties of plants in each of his 2 tanks, instead of the roc reccomended 7 or so. Other minor criticisms were brown tips and holes in plant leaves, 2 or nore different types of rock: in the same tank, a pale green background instead of the more popular black, and tropical plants in the coldwater tank.

Questioned about rocks, Mr Giles said that he thought most types exccpt soft limestone were suitable, but he would regard marble, especially if white, as doubtful,

The results of the Table Show were as follows:-

Cichlid Class

1.	Ranirezi	Mr Mason	
2.	Kribensis	Mr Bennett	Total entries: 10.
2.	Festivum	Mr Perrott	
4;	Angel	Mr L Willis	

A.O.V. Class:

1.	Mystus Catfish	Mr Brown,	
2;	Unidentified Shark	Mr Bennett	
3,	Leaf Fish	Mr Bonner	Total entries: 7.
4.	Kuhli Loach	Mr & Mrs Dolby	

We wero sorry to hear that our youngest member, Lon Stewart, lost all his fish the previous day after an accident with a therraostat, The raffle (2 *A.ramirezi*) was won by Mr Forster, a new member. with ticket number 362.

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"The Raffle will be a culture of White Spot". Perhaps some members really believed this, for the attendance of 21, though not too bad, was the lowest since the suiamer holiday period. The evening was September 17tli; the subject, Diseases, Causes and Cures. This was most excellently covered by Len Willis, who described and illustrated most of the more usual fishy complaints, and some of the leaser known ones too.

Some Colour Slides of tho Town Show and the London Zoo outing were shown for the first time. Members were reminded that the return Inter-club Table Shov; with Grays- Thurroclc (at Grays) was to take place early tho following month,

It was pointed out that club Badges were now on sale, price 4/6d each.

Mr Norris won the raffle with lucky ticket 406. The prize- a trio of Gold Tetras,

The treasurer should have presented membership cards at this meeting, but appeared to have absconded with the fundsl

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On October Ist rain fell steadily for the three hours before the start of the meeting* Despite this, when Len Willis opened the.....

proceedings at 8.20 p.m., with table show entries still pouring in at the back of the Hall, 23 members were present.

Part of the meeting was tape recorded by Len Willis.

The President said that the Table Show at Grays was to take place the following Monday evening .He then started on the Balanced Gomnranity Aquaria talk.
The location of the tank was discussed, as this had some bearing on the amount of light received from sources such as windows.. Elrctric lighting was the next topic, and it was stressed how desirable it was to obtain plenty of plants for the tank when first setting it up. All these factors were important in the battle to combat algae. One point made was that the larger the tank, the easier it was to keep the balance.

The number of fish kept in the tank seemed to have some bearing on algae growth, as several members said that they had noticed quite flourishing growths in.their underpopulated aquaria, which disappeared when more fish were added. Algae were said to do best in alkaline water, and it was interesting how the hardness of the water supply varied, in different parts of the Southend area.

At this point the Table Show Judge interrupted to say that he had no pen or paper. His wants wee attended to.

Many members commented on the poor quality of most of the live-bearers now available.Michael Willis pointed out that especially with Platies, males of today were often ridiculously small compared with females. Brian Dunn, and others, blamed inbreeding. Len Willis said that he thought frequent feedings were the answer to some extent; here was a matter for members wives if one was away from home all day !
Livebearers were said to be good mixers for community tanks, except perhaps some male Swordtails. The less peaceful Gambusias. and Dwarf Pikes are never seen in Southend.
Egglaycrs generally seem easier to keep in top condition. Barbs were recommended for beauty, though if Tigers were kept there should be at least two in the collection, as a single specimen was likely to cause trouble. It was lamented that Cherry Barbs today were not in the same class as those of Peter Blomficld's day (about 1952). Some of the best Characins were Neons, Cardinals, Glowlights, Belgian Flag Tetras (*heterohabdus*), and young Black Widows. About 20 small fish was ample for a 2-ft, tank.

Mr Mason said that the Egg!aying Tooth Carps were perhaps the prettiest of the lot - if you could keep them! Most of them would live peaceably together, a notable exception being the shovel-mouthed Lineatus Panchax..

A break was made for tea, etc., for 25 minutes from 9.20 p.m.

6 Cherry Barbs were the raffle prize. Mr Machin won with ticket number 442. The 33/~ raised for Club funds on this occasion was said by Mr Mason to be the best ever.
Some time was spent in making arrangements for the Grays trip on the following Monday Transport was arranged for 15 members and their entries.
Jim Wylie gave the results of the breeders Table Show, and the reasons for his placings(see next page). After this he gave a short but interesting and at times amusing talk on breeding fish.
Finally.....

the meting drew to a close rather later than usual at 10.45 p.m.

Breeders Table Show Results

Livcbearer Class (7 entries)

!: No.3	Variatus Platics	Mr Preston
2, No.6	Red Platies	Mr Perrott
No.3	Tuxedo Swordtails	Mr Dunn

Egglayer Class (3 entries)

1.	No3	Glowlight Tctras	Mr Perrott
2.	No3a	Ramirezi	Mr Mason
3.	No.1.	Brilliant Danios	Mr Perrott

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A TOWN SHOW EXHIBIT

Our Journal now has a range that is extending beyond our Club members and possibly it may add interest for our readers if I say something of the routine employed in setting up my own 24" x 12" x 12" exhibit in the Town Show..
Having a Fish house, I am more fortunate than many in having sufficient Twisted Vallic, Cryptocorynes, etc., to call on to makc a "splash" in a Furnished Aquaria exhibit. Frankly for a show tank at home I should thin out some of the plenting. In the Town Show effort 1 find I used 34 Twisted Vallis, strong thick; leaved plants; 6 *Ludwigia*, (in 3 pairs of varied height) 4 Cr*yptocoryne hartelliana* (2 largish, 2 small); 1 *Becketti*; 1 Dwarf Rush (the only one I had) and a good 24 sprigs of *Cabomba* - say 7 varieties in all.

The rockwork was in small pieces and I think was Cotswold Stone I brought back 4 years ago when on holiday. 1 remember I found all this Cotswold Stone very uniform in size, not showing a great deal of character and difficult to obtain in large pieces suitable,say for a 36" tank. The light colour of the stone is attractive.

I used 2 pieces, 1 rectangular 5" x 2½" and a small triangular piece, say, 3"x 3" on the edge of an imaginary line one third across the width of the tank from the left. A group of 3, largest say 6"x 2 ½" placed on the right hand third. An attempt was made to funnell down the dividing gap between the 2 sets of rock by a small piece placed between the 2 groups. I know that I spent nearly an hour "fiddling" with the rocks to try to get them just right, avoiding too symmetrical a line and not too even a balance.

The Twisted Vallis in the main was planted up across the left side of the tank (back and half-side) and the Cabomba to the right side. Here and therea piece was planted in opposite "territory" to give a slight "echo". Cryptocorynes (among the 2 groups of rock), Ludwigia and Dwarf Rash were used in an effort to give life to the.....

watcr scene..

I hoped 4 good sized Red-Eyed Red Swordtails would give rich colour against the green Vallis and Cabomba. Being taken from a large tank: in the fish house, they proved timid and tucked themselves away too much. I always like Pulchers (there were 5); they arc bold and keep position well. There were 6 *Nannostomus anomalus* which usually display attractively. These were perhaps a little disappointing and 2 more added to tho group might have helped. The 3 Rosy Barbs were in good colour but they were little more than half grown and must have lost marks on that count,
One never has all the time needed to set up a furnished display and this was no exception. I must say that I admirod Mr Howard Preston's 24"x 12"x 12" exhibit which had cleared and settled down nicely by the Saturday.. His Guppies were most attractive but had he been in a position to use a dozen and a half bold colourful fish I think he would have had a most compelling and outstanding entry,

L.E.W.

MEET THE AQUARIST - CLIVE BENNETT

One of our keenest youngor members, Clive is now agod 15 and has been keeping tropicals for. just over three years.
Clive`s introduction to fishkeeping goes back further than this however. For a long time his sister Pam had kept two small goldfisht named Hercules and Goliath, in a bowl. One day a larger goldfish joined them, and about the same time 3 White cloud mountaizi minsows were obtained, (These White Clouds came from a Mr Derek Punt, then of Royston Avenue, who at that time (about 1959) was no stranger to this Club, He bred then in an unheated 4 ;ft. tank maintained in his garden). The suddcn increase in the Bennett fish population compelled a movc to more spacious quarters, and the fisli went into a galvenisod metal tank in the garden. Clivc began to take a more active interest in the fish, and books were obtained from the local library and studied. Two Guppies were obtained, and lost no timo in reproducing themselves. A few minutes after the birth, every adult fish in the tank was observed to havc a young guppy in its mouth, Clive recalled how he sold one young Guppy to Harvey Holmes for 3d; it died within a few hours !

Soon after these event Clive took up fishkeeping more seriosly, tanks were aquired, and his present set-up began to evolve. He now has four tanks, which are kept in a leanto, an arrangement which gives sufficient natural light to grow aquatic plants reasonably well.

Clive's favourite fish are Cichlids of all types, but in particular, Marblcd Cichlids and Discus. The latest additions to his fisdh collection arc Convict Cichlids. Breeding achievements so.....

far are: Guppies, Platies, Swordtails, Blue Gouramies and Blue Acaras, The list would probably be longer but for lack of tank space which has been a handicap.
When I visited Clive a few evenings ago he showed me one of hie tanks, an I8 x 10" x 10", which was ternporalily unheatcd and received very little light, sited on the floor of the lean-to. Despite these conditions, it contained Hair Grass, Myriophyllum and Water Wisteria, of which all seemed to thrive. He expressed disappointment at never having been able to grow Cryptocorynes to a large sisc, even in better lighted tanks. One plant in which he is particularly interested is the new Blyxa, v/hich many of us encountered for the first time on the Kingfisheries outing earlier this year. Clive is a great believer in Tubifex, which he feeds to his fish often. He has had little success with culturing White Worm, and has never tried Grindal. When I mentioned Micro, he said that when he had no fry it swarmed all over the place. When the fish bred, it died off. He cultures Micro worm on — - — -Porage Oats (it gives them muscles). The oats are mixed (uncooked) to a very stiff paste with water to form the culture medium. I was shown a jar containing natural sea water, 4 months old, in which a few Brine Shrimps had been maintained for all that time, They had received no food exccpt for a few drops of liquid fry food added at sporadic intervals. No heating had been provided, -and evaporation losses had been made good by the addition of tap water. A hard algae had growii on tlie side of the glass jar, and a growth resembling nitella had also formed. The shrimps grow to a maximum of nearly half an inch, bred, and then the adults died the cycle usually took 3 or 4 weeks.. Each generation was a little smallor in size
In the near future Clive hopes to be able to convert a garden shed into a fish house.

Interviewed by J. K, Preston.

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The following article is reprinted from the NEWS LETTER of the old Foiest Hill & District Aquaria, Society, y/hich alas is no more.

HOW I JOINED THE CLUB

(With appologies to .Damon Runyon)

I am standing in this fish emporium, wishing to know why some some fish arc scratching themselves on plants and some doing likewise on other items. Now this is interesting to me because my fish arc also scratching themselves on plants, as if, maybe, they are feeling an itch,

I am wishing to. find out why this is so and I am asking the proprietor. This guy does not know; why this is so, and is wishing that I would go away as other citizens arc now observing this itch and saying that there arc some lousy fish in this tank.

This is not doing tho proprietor's trade any good and hw is telling me this when he sees another guy outside the emporiun who is he tells me, what they call a secretary. I am glad to know this, but.....

I am not, at this moment, wanting a secretary, but someone who is knowing why my fishes are scratching themselves.

He is telling me that this other guy is secretary of a fish club, and maybe he will be knowing about this,

This secretary guy is pushing his way through the citizens, who arc now, maybe, half the population of this town, and talking to the proprietor, who is telling him about this itch.

Now; this secretary, who is called Jimmy-the-Vesper, tells me thai his fishes do not have this itch and he is not knowing why my fishes arc itching.
He is also telling me why I should join this club, the club which the proprietor is telling me he is secretary of.

He is telling me this for a considerable period, and I am thinking that maybe my dear old whitc haired mother is keeping my dinner warm, and that if I agree to join this club, maybe I will be in time for supper.

I am also thinking that this guy Jimmy-the-Vesper, is wasting his time at this secretarying, and that he should be selling refrigerators to Eskimos.
All this is happening a long time ago and I am now a fully paid up member of this club.

I am collecting a considerable amount of imfomiation from other citizens, who arc members of this club and collecting an even more considerable amount of items which they are telling me are necessary to keep my fish happy and contented,

I am a simple citizen who is thinking before I am talking to Jimmy-the-Vesper, that fishes lived on pinches of stuff from little rotund boxes:, and that one of these boxes was all that was required, besides a tank, fishes and plants,

Since I am a member, I am discovering that; this is not so,

Besides the tank, fishes and plants, which I am only looking at odd moments when I am having time to spare from the boxes of worms, dishes of smaller worms, jars of shrimps, dried and brine, corn flakes, dog food, cat food, bread and milk, joints of meat, whale neat, buckets of dirty water which they are telling me is infusoria, but which my mother is telling me is not stopping in the dining roon much longer, and aerators, syphons, rubber tubing, cables, sockets, adaptors, insulating tape, firat aid kits, leaflets on reviving citizens who are getting themselves electrocuted, medicine chests full of bottles marked "POIS0N" T.C.P., Dettol, etc,, a bottle from a citizen in Birmingham who is telling me it cures Gill Flukes, and who I am telling does not, Glass wool, Charcoal, sacks of peat, gravel, rocks, etc, and other items which are necessary for keeping fishes happy and contented . eel.
I am thinking that maybe I am knowing more about this fish.....

keeping now, as when I am first starting, I am only getting an itch, whereas now I am gettingh white spot, dropsy, wasting disease, Gill flukes, pop-eye,fungus, and other items which are keeping the fishes from thinking about the itch.

W.G.R.

WORLD OF THE AQUARIST

Mr Bill Freeth, Public Relations Officer of the Auckland Aquarist & Pond Society has written me about tape exchanges, talks and news.

I gather that at the present there are 14 or 15 different Aquarist Societies in New Zealand and Mr Freeth would like to hear a tape recording from part of one of our Club meetings, somr news on breeding say Neons, Chocilate Gouramis, etc., and achat about one of our club meetings. We are taking steps to meet his suggestions, although we have no fist hand knowledge on breeding Chocolate Gouramis or Harlequins – or has one of our members been hiding his light under a bush! The idea is that this tape shall pass round to all the Societies in New Zealand.

News also comes that there is a flourishing Aquarist community inMufulira, Northern Rhodesia (the copper belt) and we are hopeful of establishingexchange of news here, and maybe photographic slides etc..

The writer is a member of the American Killifish Association (A.K.A.) and details have just come through of their second annual 2 day show (entirely of Egglaying Toothcarps), the host club being the Cleveland Aquarium Society, Ohio. Many entries came though the mails from members in different parts of America. The fish were exhibited in flat sided bowls, each withit`s individual concealed light. There were six classes, covering 104 entries and the staging ran to almost 150 feet. Best Tooth Carp in the show was a *Pterolebias longipinnis* the second an *Aphyosemion christyi.*

Fish and eggs were also contributed for the Auction for A.K.A. Funds and fetched nearly £300. At the informal Mixer and Dinner on one of the tables a decoration placed before each dinner was a small white jar containing three toothcarp eggs, species not disclosed. Some of the eggs started hatching during dinner and many members hatched their eggs and will anxiously waitto see what their particular species turns out to be.

A "feeler" is put out in the Bulletin about a regional show in England next year. A years Associate memberships costs the equivalent of about 35/- , and gives a monthly bulletin, a first class quarterly Brochure of developments and notes and a complete directory of members withwith fish and eggs available to swap or purchase. (Air Mail used)

The subject of Egglaying Toothcarps will no doubt be treated fully in our club programme next yeatr

L.E.W.

SOUTHEND TOWN SHOW FURNUSHED AQUARIA RESULTS

		18 x 10 x10								24 x 12 x 12			
Tank No	Max	1	2	3	4	5	6	7	8	9	10	11	12	C/w
Fish (25)														
Selection	5	2	1	3	1	3	2	3	2	3	4	3	3	3
Size	8	5	3	6	3	4	4	5	5	7	6	4	3	5
Quality	12	8	5	8	5	7	4	7	6	8	8	6	4	7
Plants (25)														
Selection	10	6	5	6	4	7	4	5	4	7	8	7	4	4
Quality	15	9	7	12	6	12	6	8	6	13	10	11	10	10
Design (50)														
Design	15	9	6	10	8	7	7	10	7	11	10	11	5	5
Originality	5	3	2	3	3	3	3	3	3	3	3	4	4	2
Permanency	5	2	2	3	2	2	2	3	2	3	2	3	2	2
Clarity	5	4	4	3	2	4	2	2	4	3	3	2	2	4
Rockwork	10	5	3	6	4	4	5	7	5	6	5	6	4	3
Planting	10	7	4	8	5	5	4	6	5	8	7	7	4	5
TOTALS		**60**	**42**	**68**	**43**	**58**	**43**	**59**	**49**	**72**	**66**	**64**	**45**	**50**

Competitors:

Tank No 1	Mr Plappert	(2nd)
Tank No 2	Mrs Iles	
Tank No 3	Mr Preston	(1st)
Tank No 4	Mr Holmes	
Tank No 5	Mr Perrott	(4th)
Tank No 6	Mr Bonner	
Tank No 7	Mr Brown	(3rd)
Tank No 8	Mr Mason	
Tank No 9	Mr Willis	(1st)
Tank No 10	Mr Bennett	(2nd)
Tank No 11	Mr Preston	(3rd)
Tank No 12	Mr Cheswright	
Coldwater	Mr Perrott	Highly Commended

Judge Mr H.A. Giles

For some of us, the Tpwn Show story began soon after 3`oclock on the afternoon of Wednesday, 14th August. Messrs Bennett, Holmes and.....

Preston, closely followed by Plappaert and Martin, turned up at the show ground at the hour proposed by the Show Committee, but it was 2 or 3 hours latter before members arrived in sufficient numbers to enable much work to be done. It was disappointing then to find that the wall of our marquee were obviously going to be left until almost the last possible moment. Even worse was the fact that the 100 sandbags we had asked for were nowhere to be seen. A search revealed a large number of sand bags in the model tent. As usual, a misunderstanding had occured and only half the number of sand bags ordered had been delivered to the Show Ground. We washed and erected the stands, there was the usual frantic search for beer crates. The tanks arrived thanks mainly to the efforts of Brian Bonner. We had no electricity and no sandbags, there was not much more that could be done until the next day.

Thursday 15th August Our sand bags arrived by midday, and the pond was built by Messrs Booth, Bennett, Holmes and Mason. During the afternoon, the "Southend Pictorial" came across some of our "shower" hard at work, and his picture appeared on the front page of the paper next evening (friday).
Johnny Mason and Dave Perrott were kept busy with electrical work. Towards evening members turned up to set up their tanks, and this was the major event of the evening
. some of us renewed our acquaintance with our old Hon: Sec` George Hedger, now a budgergar enthusiast.
About 1.00 a.m. One end of Clive Bennett`s tank started to burst, having been weakened by a crack. Dave Booth ddid wonderful work on the leak with Brian Martin`s tube of "Bostik", but unfortuneatly the tube burst all over his hands. It is beleived that to this day our worthy Secretary is still walking around with sticky black hands!
Worse was still to follow. Someone discovered water pouring from Harvey Holmes` aquarium. A rapid investigation discovered that the bottom had given way. (Surely 24 oz glass for an 18 inch tank in an exhibition such as this, when the use of fairly large quantities of rock and gravel may be essential to the exhibitorto put on an attractive display. Anyway the amount of rock and gravel used by Mr Holmes could hardly be called excessive by any fair minded person). Harvey`s tank was replaced by the spare tank, and some of the rock and gravel transfered. Sometimes latter, perhaps about 4 a.m., everybody except myself went home.

I stayed until 6 a.m., and I was rewarded by being one of the very few people who saw the sun on that Friday. Later in the morning several members arrived with their fish, oor busied themselves with last minute preparations; for instance the water pump had to be started for the pond(it was not easy!)., and Goldfish had to be brought for the pond. Harvey Holmes was told by the Secretary of the disaster that had befallen his tank, and he arrived to set it up again.

Members of the publicstarted to arrive at the Show at about midday although it was early afternnon before the official opening took place, in pouring rain. Frequent bursts of rain and strong winds continued all afternoon, and it wasunder such conditions that the judging took place. Towards evening the weather moderated, but the show had got of to a bad start. The last of our members left at 11 p.m.

On the next morning, **Saturday,** there was brilliant sunshine – but of course, this meant that the massive cumulonimbus clouds soon built up to give heavy showers before noon. As a result there were far fewer.....
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visitors than co-old have teen hoped for.
We were very lucky about 6 p.m. To miss the thunder storm which flooded Eastwood, on the other side of town. According to those who witnessed it, it would have just about washed out the show completely.
The weather deteriorated again; continuos rainaccompanied by a fresh northerly wind, set in before mid-night, and was persistant on the Sunday morning. This may have been the cause of the electrical failure, which was first noticed by Clive Bennett and rectified by Brian Martin. Later the air pump blew up with a spectacular explosion, but it was got going again.

The Show Ground was very muddy.
During the afternoon, Horace Giles came along to have a second look at tho tanks, which had mostly improved,as the water had cleared and the plants had settled down. Dave Pcrrott's fighters almost spawned in their tank:, and Clive Bennett's Blue Acaras did.!
The Show died away early in the evening, and under the leadership of Jim Wyie our section was taken dowr probably in record time.
Mention should be made of tho attractive Vivarium exhibit put on by Graham Halsey. This proved very popular with visitors,
Was the Show a success? From the point of viev; of this Club, there can be little doubt that it was. About ten now members joined during the Show. There seemed to be a lack of enthusiasm and spirit nearly everywhere compared with the previous ycar which was not really surprising as everybody knew that a big financial loss was inevitable and the whole future of the Show was in doubt. The weather also did its worst.
The actual loss on the Show has been revealed as of the order of £9,000, and the Town Council has recently decided that there will bo no Town Show as such next year j

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KINGFISHERIES OUTING, JULY 21st

T he Club`s second outing of the year, to the Kinfisheries Aquarium, Beckenham, Kent, made a small financial loss, as only 19 of the available 41 seats on the coach were occupied. Otherwise the day wasa great success, and those who did not think it worthwhile to come are assured they missed a very enjoyable and interesting day.
The weather v/as again near-perfect for the trip; warm and dry with abundant sunshine. Interest was aroused on the journey when Michael Willis passed round a recent copy of the News Bulletin of the NorthEastern.....

Indiana Aquarium Society. This publication is edited by J, George Mannisto of Fort Wayne, Indiana, who is also President of the Society. Mrs. Heath of the Romford Aquarist Society had sent a copy of our Spring number to the N..I.A.S., and we look forward now to a continuing exchange of Bulletins between Southend and Indiana. (In a later N.I.A.S. Bulletin, Michael Willis` article "A Few Comments on Plants", has been reprinted).

The coach proceeded at quite a leisurely pace to London; unfortunately the pubs at Romford were closed! Reaching the City at noon, we crossed Thames via London Bridge. The route then was through Southwark, down the Old Kent Road through Camberwell and New Cross; then via Deptford, Lewisham, Cat ford and Bellinghan, and it was hereabouts, at about half-past twelve, that we made a welcome stop for lunch.

Most of the party adjourned to the adjacent "Peter Pan's Playground", a park equipped v/ith a cafe and various amusements including a boating lake. An hour was spent whilst Messrs Mason, Cheswright and Holmes devoured their chickens, and others loss fortunate consumed sandwiches and sundry other delicacies..

The time cane to board the coach again for the short run to Croydon Road, Becvenham which took: only a little over ten minutes. The proprietor was ready for us and the party swarmed eagerly into the shop for a Iook round. There were a few; more than thirty tanks on view, but no purchases were made at this stage. After a while we returned to the coach and followed the proprietor in his car to his home, where a larger collection of tropical was housed in a cellar. An inspection of the garden was called for first, where there were several ponds containing large numberos of goldfish and also some golden orfe.

We then descended to the cellar, where there, were a large number of tanks, each one individually heated and lighted, Most of us were quite impressed by the fish and plants, and many purchases were made, finally we made a second visit to the shop before, starting on the return journey.

A pair of Tuxedo Simpson Swordtails were raffled on the coach, and won by Mr. Preston.

A stop was made at Romfordord Market Place for refreshments, etc,, and then we had an unexpected diversion to Wickford to lose our Treasurer, before returning to Soutliend.

TABLE SHOW .at TIIURROCK Monday 7th October

The 5 cars carrying members to this event met beyond Hadleigh Victoria House a little later than planned, raced down to Grays, and there became seperated and lost. Eventually we all found the Hall by 8.45 p.m, but it was at least 20 minutes more before all the Table Show entries were benched and a start Mr & Mrs Cheswright arrived just in time for tea and sandwiches, having come thegreat way round via Stanford-Le-Hope !

The raffle was drawn by Mrs. Cheswright; ticket number 33 was the winning one, but alas the prize "All About Tropical Fish" D. McInery, went to a Thurrock member. But the home club certainly did not have things all their own way in the Table Show, as can be seen from the table of results.

Southend were also victorious in the Quiz which was held after tea, with 7 correct answers to Thurrock`s 3 Did you know, by the way,.....

that the latin "aquarium" means `a watering place for cattle`, the ideal temperature for *Riccia* is isaid to be 68 deg . F., and that if all of the fins of a fish were amputated it would float belly upwards? Just a few facts that we learnt during the quiz.

Before the end of the meeting, there was a short discussion about White Spot disease.

TABLE SHOW

Class 1	1...Mr Mason	Southend	**Class 4**	1... Mr Pearl	Thurrock
Fighters	2...Mr Cousins	Thurrock	A.O.V.	2...Mr Wylie	Southend
	3...Mr Machin	Southend	Egglayer	3...Mr Martin	Southend
Class 2	1...Mr Perrott	Southend	**Class 5**	1...Mr Pearl	Thurrock
Labyrinths	2...Mr Rolfe	Thurrock	Catfish	2...Mr Williams	Thurrock
	3...Mr Cousins	Thurrock		3...Mr Williams	Thurrock
Class 3	1...Mr Mason	Southend			
Danios	2...Mr Pearsall	Southend			
Rasboras &	3...Mr Cheswright	Southend			
Minnows					

FORTHCOMING ATTRACTIONS

October 15. Guppy slide show & talk
November 5 AUCTION SALE & general discussion
November 19 BEST FISH OF THE YEAR TABLE SHOW
with talk on members breeding achievements
December 3 ANNUAL GENERAL MEETING **December 3**

STOP PRESS

Clive Bennetts reports a successful spawning of Cichlasoma nigrofasciatum although his female was amere three-quarters ofan inch long and the male one inch. (This species grows to a maximum size near 6 inches

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SEX

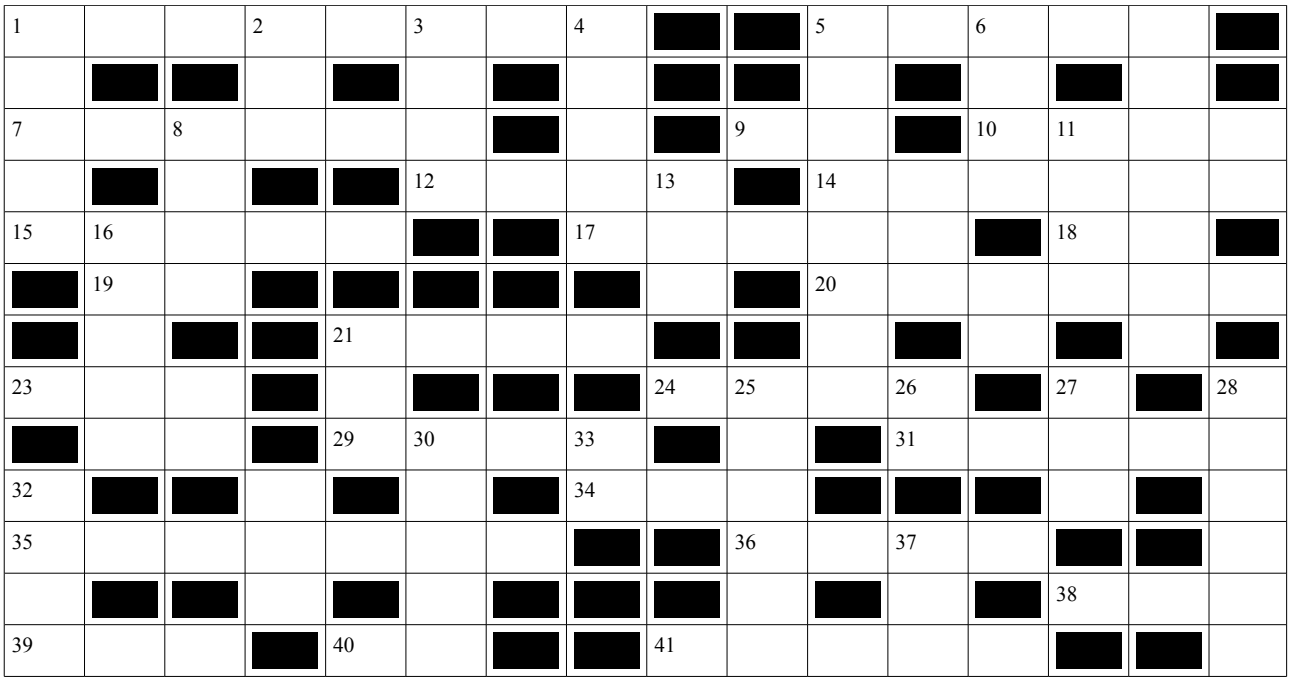
by James Hedley Chase Mash
(from October 1953 SLADAS JOURNAL)

An aquarist (whether a he or a she)
Gives thought to the sex of his (her) fishes
To know all the answers of sex, you`ll agree
Is first of a breeder`s "three wishes"

A man who I know who kept a few fish
Through the volumes gad pondered and battled
Resulting in putting a type in a dish
Then judged it male if it rattled!

Now this is the wrong way of proving the sex
Of fishes both cold and exotic
And expert—in this way—you`re likely to vex
They will thin you drunk or neurotic
(continued near the foot of next page)

S.L.A.D.A.S. CROSSWORD by Dennis Plappert



Across

1.. not coldwater
5..livebearer
7 Native of India, Burma
9..Introduces alternatives
10..ornament
12..not us
15..weapon or fish
18..shortened name
19..will find itself
21..what every tank needs
24..fish have two
31..barb
34..snake like fish
38..perceive
40..No, reverse
14..climber, tortoiselike
17.. sometimes used on tank bottom
20.. Comes vfrom Borneo; if mixed with other breeds will kill
23. A colour for brightness
29 a small cleaner
35..Native of East USA & Canada
36 delayed perhaps
39..the sun does every day
41.. home of many tropical fish

Down

1..you can fix these on stands
2.. pea container
3..hits your pocket
4..men or mollies
5...heavenly fish
6...brings oxygen
8..tetra
11..fish can`t do this
13.. wipe your feet on it
16..in the tank
21 propellor
22.. home of a molly
25..Colour of several popular fish
26..saint
27..maturity
28 take care of fish when you do this
29 found washed upon a beach sometimes
30..to set, maybe with T-square

32..for catching fish
33. The (french)
37..name of boy

SEX (continued)

So gather round comrades—a secret I`ll tell--
If sex is the cause of your flurry.
In spawning—the one that lays the eggs is the "gal"--
the others a male so why worry
But then you will say with a face that unbends,
"How all about the livebearing fishes?"
So say I, "Elemenary, my dearest friends,
The gravid ones **must** be the witches!"

SOUTHEND, LEIGH & DISTRICT

AQUARIST SOCIETY

Number 4,
JANUARY 1964

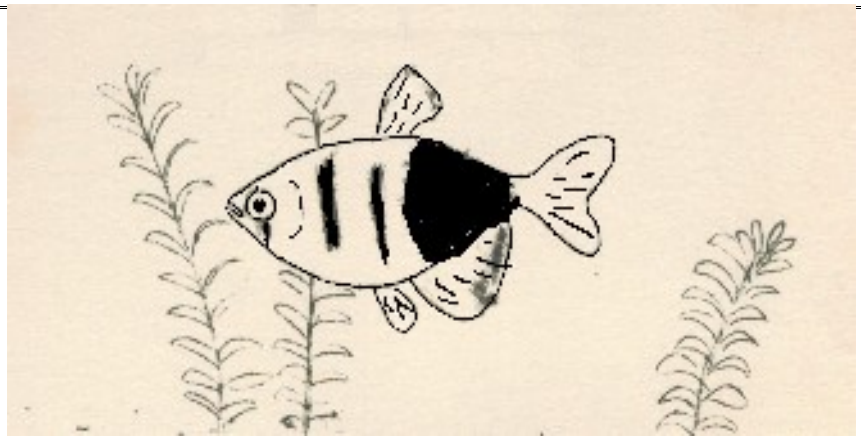
QUARTERLY MAGAZINE

THE SOUTHEND, LEIGH AND DISTRICT AQUARIST SOCIETY

QUARTERLY MAGAZINE No. 4~ January, 1964

The Society neets at 8.00 p.m. on the first and third Tuesday in each month at:-

THE LIBERAL HALL, Clarence Road, Southend-on-Sea, Essex.



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PRESIDENT'S MESSAGE.

Dear Readers,

In this our first issue of the Journal in 1964 I would like to take the opportunity to wish you all a belated Merry Christmas and a prosperous and happy New Year.

The past year has in my estimation been a ao»t successful one; I hope this one will be even better. I was very pleased to see such a goodly gathering at our A.G.M., and I feel that that was an excellent omen for the coming year.

We have hopes this year of starting a Junior section within the Club, so any member who has a young, budding Aquarist tn their family please bring him or her along.

Let us all hope that our efforts in breeding all the new fish that come our way will be successful. I think our friend Dave Ches wright has had at least half a dozen spawnings of Neons without any success - better luck in this new year Dave.

Finally let us not forget our old friend Len Willis. I know we all wish him the best of health and a speedy recovery - I think Michael is lost without him on the end of that epidiascope;

PS, Thank you Jim for judging our Table Shows. Carry on the good work !

John Mason
(President)

FROM THE EDITOR: -

From me also, belated New Year greetings to all our readers

As many of you will know. Lcn Willis was forced to spend several weeks in hospital, until immediately before Christnas. He is now back at home and making good progress; we hope to see him back at our meetings later in the year. Len`s "World of the Aquarist" feature will we hope re-appear in future issues of this Journal.

At the suggestion of your Committee, the Club Rules have been reproduced in this issue, for the benefit of those members who have joined the Club since the supply of green Rule Cards was exhausted... It was also decided to publish nanes and addresses of members; lack of space has restricted us to 5 members this time, but more will appear in April. We would like to wellcome the 3 new members who have joined us in the last few weeks, Mr. S. Smith of Hockley, Mr. B. Andrews of Thundersley and Mr. J. G. T. Hearne of Wiokford.

Finally I would like to express my thanks to all those who have contributed to this number or otherwise helped in its production.

J. H. Preston
(EDITOR)

TEN YEARS AGO

(reprinted from January 1953 S.L.A.D.A.S. Monthly Journal)

Some thirty of the stalwarts braved the elements having forsaken on a raw winters night, the home comfort of an arm chair by the fire, carpet slippers and feet up , to attend the first meeting of 1953 . The atmosphere in the hall was as chilly within as without, but when we had been realized of some of our filthy lucre by Hon: Treas` (yes annual subs are now due!) things warmed up, particularly when tea and cakes were promoted from their customary mid way to almost the opening ceremony. Mesdames Gibbs and Cooke must have heard our knees knocking and our teeth chattering!

The meeting then got under way by our President welcoming a new member Mr Knight, who, he explained was in the rather unusual position of being a member before he was a fully fledged aquarist, in fact before he was a fishkeeper. The paraphenalia of the aquarist, was in his case still a credit in the bank.! The meeting then decided by discussing algal growth and introducing into later points various fish diseases, that the life of an aquarist is no sinecure: and from the advice showered upon him, Mr Knight must have reflected whether to proceed further in the matter, whilst discussion of the minimum needs must have assured him thathe the first requirement to being an aquarist was unlimited funds. Let me ,however, assure him that such is not the case, we are only ordinary folk if you ignore our "fishiosycrasies!"

The first item discussed was ,rather naturall, the wherewithall in which to place the fishes.As it was hoped that all new fishkeepers(and I might add some not so new) will in time graduate to aquarists (thre is a subtle difference)it was generally agreed that three tanks was the minimum; two not less than 24 x 12 x12, one a comunity tank, and the other for "dabbling ", the third and most important, though of smaller size (15 x 9 x6 was ample) for use as an isolation tank in which any additions could be quarentined, thereby ensuring a clean bill of health in the comunity tank. These would suffice, finance being the limiting factor, as a working basis on which to expand, until the ultimate fate of living rough, his home having been given over to the fishes, obtained!

Standardization of all equipement was considered a good thing , one thermostat could cope with all the tanks, all heatersc being of the same wattage, instead of a heterogenous assembly of tanks, with different wattage heaters necessitating a large stock of spare to be carried against emergencies.

Thermostats came next under review, it was agreed that external fitting had many advantages over submesable or partly ditto withwith external adjustment types. It was however noted that the variation of plus or minus one degree Fahr, of which some makers seemed very proudtended, rather, to coddle our fishes, a range of eight to ten degrees being considered more realistic.

Heaters came next under discussion - there were few comments -a heater being a heater after all is said. It was however agreed that they should be so arranged that they don't come into contact with the glass of the aquarium, as some of us have found to our costl

Condensation was regarded as an enemy by all, but despite its proximity to live wires - and we have some! - was not considered dangerous. Then that ohl so controversial question of lighting was raised. Suggestions ranged .from, all over covers to narrow reflectors, from natural daylight to artiiicial light, with the corollary of ultra-violet rays. It was argued loud and long that a thin glass cover (24 oz.) with a -long reflector raised sufficiently to allow air to circulate between the bulbs and the glass was one of the best ways of providing illumination and defeating condensation, also it was less likely to provide additional sharp edged compost in the tank below!. Our President was not convinced, advocating the use of wire rcinfored glass for the cover. (I rather suspect that he uses it because it stands up tc rougher treatment, accidental or deliberate !)

Mr. Knight and the rest of us departed at approximately 10 p.m. to cogitate on matters fishy for another fortnight.

CLUB NEWS.

The October 15th meeting opened at 8.25 p.m. with the Vice-President, Len Willis, introducing to the 24 members present the tape talk on Guppies which he had recorded with the Journal Editor, Howard Preston. Colour transparencies and other illustrations accompanied the talk, with Michael Willis operating the epidiascope. Some of the Federation of Guppy 3reeders' Societies Show Standards for Guppies were also presented on the screen. Some facts about'Guppies which emerged were that; they do best in clean, well oxygenated water of moderate hardness, the optimum pH. being from 6.8 to 7.2.. Indian Fern was mentioned as "the" plant for Guppies (very many of the specialist breeders use it), and Giant Hygrophila, Water Wisteria, Cryptocorync hatelliana and Fourleaf Clover were said to be of doubtful value to the Guppy breeder, possibly having a harmful effect on the fishes.

Various technical and other difficulties meant that members were only able to hear a very little of the Henry Roth tape. I might add that considerable amusement was caused by soue of the background noises on Len's tape, notably a very squeaky door, and Michael mowing the lawn!

A 20 minute break for tea, etc., commenced at 9-25p.m., and then the raffle was drawn, this being a rather lengthy procedure on this'occasion.

The winners wore:-

1. No. 76. Mr. Bonner - *Aphyosemion arnoldi.*
2. No. 84. Mr. Ollett - 1 young pair Red Veiltail Guppies.
3 No. 37. Mr. Norriss - Trio Golden Vieltail Guppies.
4 No 23. Mr. Pickctt - 1 young pair Red Veiltail Cuppies.

and 5 No.56. Mr. Barker - 1 male Coloured Vciltail Guppy.

Before the close of the meeting, Mr. Mason started a general discussion by telling us of his recent failures at breeding Cardinal Tetras.

22 members escaped the Gu Fawkes celebrations on November 5th to attend the auction, which smarted, at 8.30 p.m. Mr. Mason, assisted by Messrs Bonner and Perrott, knocked dovn 29 lots for a total of £6 - 1s - 3d. Tea was served at 9.255 p.m., and durlng the interval Vic Pickett won the raffle prize of 3 Tiger Barbs. The meeting was resumed at 9.50 p.m., the first item for discussion being which fishes were elegible for the Best Fish of the Year Table Show. It was argued, successfully, that better fish might well have been raised during the last few months than had been exhibited in the Club early in the year. Various fishkeeping topics then came up for light hearted discussion before the meeting finished at about 10.25 p.n.

The November 19th meeting got away to a rather late start and it was after 8.35 p.m. when our Presidentm made the first of several preliminary announcements. An hour's discussJon on "Members Breeding Achievements"' followed, though from the deathly hush which descended at times one might have thought that most of the 23 members present .. had kept only sterile fish. Vic Pickett had brought some of his young Berlin Swords which seemed to have queer shaped tails - it was decided that this was inherent in the variety, and I will have more to say on the subject in our next issue, and the breeding of Fighters and Ramirezis was discussed at some length. Other egglayers were dealt with more briefly, and when the topic of conversation switched for a while to heating, Mr. Pearsall, suddenly inspired, suggested pumping hot air or steam to the tank via the air pump!

A half-hour break was held for tea, etc,, and Vic Pickett made it a partial hat trick of Raffle successes by winning the prize of 2. Bronze Catfish. After the interval, the Table Show Judges, Jim Wylie and Dave Booth, announced the following results-

Best Fish of the Year Table Show.

1.- No. 481 Speckled Molly.....Mr. D, Plappert (88 points).
2.- No. 466 Mystus Catfish.....Mr,B Martin (84 points)
3.- No.473, Bleeding Heart Tetra..Mr. J, Pearsall (83 points).
4-. No.474 - Kissing Gourarai.....Mr. D. Perrott (82 points).

There were 23 entries. The winning Sphenops - a male - was a well-marked fish of good size.

.**ANNUAL GENERAL MEETING,** December 3rd. 23 attended, and the start was again late, at 8.45 pm. Mr. Mason optimistically announced that a "right carvo up" would now commence (!) and then 50 minutes were spent discussing the past year and the accounts. Jim Wylie indulged in much good natured heckling, until it was suggested that he make the teat. Mrs. Iles was thanked for her vork in making the tea so often. An interval was then held until 10 pm«, when the following trophies vrere presentedj-

Du Boisson Cup (Best Characin of 1963) to L. E. F. Willis.
Barnes Oak Cup (Winner of breeders egglayors Class) to D.G.Perrott.
Coronation Cup (Winner of breeders livebearers Class) to J.H.Preston.
Jones Cup (for best tropical fish of the year) to D. B. Plappert.
Brooks Shield (Best Furnished Aquarium .) to L. E. F. Willis.
Brooks Shield II (2nd best Furnished Aquarium) to J. H. Preston.
Southchurch Cup (highest aggregated poiits in Table Shows during the year) to D G . Perrottt.

The Executive Committeefor 1964 was then elected - see page 1- and Mr. R. Machin and Mr. J. Wylie were appointed as Honorary.....

Auditors. Mr. Mason, elected as President for the second successive year, was called upon to nake his second speech of the evening. He asked the members for ideas for the coming year, and although few were forthconing, Dennis Plappert suggested that the Hone Furnished Aquaria Competition should be reinstated, (The Connittee have since agreed that this will take place during the summer). Jim Wylie said that the Committee should look into the possibility of holding a Show during the year.
The meeting closed at 10.35 p.m..

On Decenber 17th, two dozen menbers turned up for the "Aquarist on Holiday Slide Show" . Once again a start could not bo made before 8.40 p.m.. The first half of the evening's progranne consisted of slides taken by Michael Willis and his brother, Cyril Barkerer, and Dave Cheswright. The places "visited" ranged from the Costa Brava, St. Malo, Greece, Cyprus and Israel to a great variety of locations in England. The usual break was held for refreshments, and the raffle prize of 2 Weather Loach went (again !) to Vic Pickett.
After the break, members were entertained by films taken by your Editor on the Norfolk Broads and in Southend, including some shots of the 1963 IIluninations. Contrary to sone rumours, the film of the bonfire and fireworks was NOT taken in the Editor's "fishroon°l !The Norfolk Broads films Auditors. Mr. Mason, elected as President for the second successive year, was called upon to nake his second speech of the evening. He asked the nenbers for ideas for the cooing year, and although few were forthconing, Dennis Plappcrt suggested that the Hone Furnished Aquaria Competition should be reinstated, (The Connittee have since agreed that this will take place during the sunnor). Jto Wylie said that the Connittee should look into the possibility of holding a Show during the year.
The meeting closed at 10.35 p«n.

The first meeting of the New Year, on January 7th, drew 23 members. Michael Willis began the eveningby starting, at 8.15 p.m., with a general informal discussion. The Auction commenced at 8.30 p.m. and 44 lots came under the hamer, vith Johnny Mason in charge, assisted by Michael Willis and Harvey Holmes. A total of just over £10 was raised - the best for a long time. Disaster struck the neeting at 9.15 p.m.., when it was announced that soneone had forgotten to bring any tea ! It is not expected that this will happen again ! A 25 minute.interval was held, without refreshments but with apologies. Programme Cards for 1964- were distributed, and a reminder was given - again - that annual Subs, were due. The talk on setting up furnished aquaria for beginners was given by the President; much of the ground has already been covered in this Magazine, but one or two other points energed. Fewer than 10% of the members present had troubled to earth their tanks, although Mr. Hearne, a new member, told us how it was quite easily done. Mr. Mason did NOT recommend the practice of using one thermostat to control several tanks, because failure of the heating system in the controlling tank means that all the other tanks will also "boil" or "freeze". Losses could than be considerable.
The meeting finished soon after 10.30 p.m..

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Mr J. MeNaughton

We deeply regret to announce that Mr. J. McNaughton passed away during Decenbcr. "Mr. Mac" as he was. known to members, belonged to the Club for many years, and took a keen interest in coldwater varieties. We extend our sympathies to Mrs. McNaughton..

Hemichromis bimaculatus- The JEWEL ClCHL ID

by C . Bennett

Hemichromis bimaculatus or the Jewel Fish is an African Cichlid, and is one of the most colourful members of its family. It grows to about 4 inches long and is the typical Cichlid shape. Favourite foods of the Jewel Fish are small fish, garden worms, Tubifex, and as a delicacy, Daphnia.
The normal colour of Jewel Cichlids is a browny-grey with a large black dot in the centre of the body. Fins and body are both covered in brilliant irridescent scales - the "jewels" - and there is a larger "jewel" on the gill plate, although this marking fades away almost completely from time to time. Indeed the whole colour of the fish is very variable; not infrequently, especially at breeding time, the fish assumes quite a reddish appearance. The tail fin has a red line around its edge.
These fish are very difficult to sex; the finnage has been the same on all the ones I have seen. According to Thos. B. Marshall in his book "Breeding the Cichlids", in the male the jewels run all the way round the outer odgc of the caudal fin; but in all the fish I have observod the jewels only extend half-way round the fin's edge - and I refuse to believe that I've only been looking at fish of one sex!

I have two Jewel Fish in a 24" x 12" x 12" tank which is maintained at 7°8 degrees F. They eat ravenously, and although they are still timid they are slowly becoming more tame and will rush to take food from my fingers.
The only real fault one could, find with Jewel Cichlids is their habit of eating other fishes. Other fishes are in fact their favourite food and the best one to bring them into condition. They do seem to prefer adult smail fishes rather than fry (my Jewels have eaten fish up to one inch long, the main source of supply being Howard Preston's culled Guppies and Swordtails). This live food immediately brings them into better colour.

I have so far had no success in breeding Jewels. I conditioned what I had been informed was a pair in a 2-foot tank and fed them heavily on Tubifex, garden worms and fish. They courted, spreading fins, chasihg each other and locking jaws, but nothing came of it, and after several of these experiences I am forced to the conclusion that my two fish are both of the same sex.
So if anyone has a spare tank and a surplus of such fish as Guppies or Platies, then the Jewel Fish is the one for them.

NEONS WITHOUT FRY

by D.M. Cheswright

I have been attempting to breed the Neon Tetras for some time, having obtained fry on one occasion only to loose them ten days after hatching .
According to information gleaned from books and fellow aquarists the essentials for breeding are:-

A). Healthy young fish - 6 to 9 months eld.

B). Soft acid water- around 6.4 pH and 2 degrees German hardness.

C)Cleanliness - necessitating sterilising tanks and equipment.

D)Darkness - very little light is apparently needed to destroy the eggs or yoong fry.

E). Temperature - 70 to 72 degrees F.

F) . Patience.

Now to deal with the above as applied by myself.

A). Having obtained 6 ,½-inch Neons in July, 1963, by October it was apparent that there were 4 males and 2 females and their age was guessed at about 6 months. Females are quite easy to spot because of their fuller and rounder shape at most times: males arc more difficult to decide on as they tend to be quite fat after feeding and it is best to inspect the fishes in the morning, before feeding, when the males' bodies will be flatter underneath and slim when viewed from above or face-on.
The Neons were kept in a 24"x 12" x 32" tank, together with Harlequins and young Leeri Gouramis, a total of 18 fishes. This tank has a peat bottom covered vith gravel and a Peat Filter has been running at ail times- This has kept tho water at a pH of 7.0 (neutral) but so far has not made the water at all acid.
Feeding has been on a variety of dried foods, small amounts of finely chopped Tubifex (once every 2 days), and even less Daphnia -when available.
B). The water used was tap water passed through the "Permatit" Ion Exchange Resins "Zeo-Karb 225" and "Dc-Acidito FF" . This process is rather complicated and could form the subject of a separate article but the result is to produce water which is extremely soft (2 decrees German Hardness maximum) and acid to varying degrees. Having tested this water over a period I have found that, although it remains soft for a considerable period, the acidity will change from pH 6.3 (acid) to alkaline (pH over 7.0) within 10 days if fishes are present and within 21 days if kept without fishes in an open container. This could obviously have a bearing on the success or otherwise of breeding . I have used water at pH` s from 6.2 to 6.6 in my attempts..

C). The set-up used for each attempt consisted of a 10" x 8" x 8" all-glass tank, 4 inches of treated water, 1 nylon mop, cover glass, net and a black cloth to completely cover the tank.. The tank, mop and cover glass must be sterilised before use and I used a solution of "Diseasolve", soaking the articles for 1 hour, then rinsing under a running tap and finally rinsing out with a quantity of the prepared water.The tank was then filled to a depth of 4 inches with the prepared water, the mop placed in and the tank, with the cover glass on. placed on the cloth in a position in the fish house where it was hoped the temperature would stay at 70 to 72 degrees F. The net meanwhile was kept in a jar of the sterilising solution. The tank was completely covered with the cloth, and was now ready for the pair.

D). Darkness appears essential until the fry are free-swimming and the only light allowed to the tank is when inspecting for eggs, removing the parent fishes and seeing if fry are present. The introduction of light encourages the growth of bacteria which will destroy eggs or young fry. Inspection of the tank for eggs or fry involves lifting a small cornerof the cover for a few seconds only: removal of the parents must be quick, using a sterilised net, and the cloth replaced immediately. The fry hatch in about 24 hours and arc free-swimming 3 to 4 days later. Feeding should commence on the 3rd day after seeing the fry and a side of the tank away from direct light---can then be uncovered. The rest of the tank can be uncovered in stages over 2 to 3 weeks.

E). Low temperatures are considered essential from the information I can obtain although it will be seen below that the fluctuations in my only hatching to date varied from 70 to 76 degrees F. It would, therefore, seem that temperature is not quite as important as the other factors. All temperatures noted were taken on top of the covered tank.

The parent fish wore separated into large jars one day before placing them in the tank after dark, using the sterilised net. Between spawninggs they were kept inseparate 6" x 6" x 6" tanks filled with treated water. The breeding tank was insp[ected morning and evening until eggs were seen, when the parent fishes were removed regardless of whether or not spawning was still in progress. All eggs appeared to be scattered over the tank bottom and not on the mop. A time-table of pawnings follows:-

	pH	German Hardness	Parents In	Eggs seen	Eggs fungused	Fry seen	Temp. Variance
1)	6.4	2 deg	28th October	8.30. 1st November	4th November	----------	72-76°F
2)	6.4	2 deg	10th November	8.30 13th November	15th November	----------	68-74°F
3)	6.6	2 deg	19th November	8.00 21st November	---------	25th November	70-76°F
4)	6.3	2 deg	26th November	1^0.00 1st December	5th December	----------	70-78°F
5)	6.2	2 deg	5th December	10.00 8th December	8th December	----------	68-74°F

Inspection for fry was made in 1) and 2) before the fourth day as it was apparent when the eggs were seen that all was not well and in 5) the eggs were fungused when found.

The fry in 3) were about 50 in number jerking through the water and the tank was covered for a further day. Then the front of the tankas uncovered and the fry were mostly swimming properly; those which were still jerky did not take Brine Shrimp and './ere dead within a further 3 days. I commenced to feed Brine Shrimp in very small quantities on 26th November and it was taken by all fry which were swimming properly. Feeding with shrimp was carried out morning and evening and any dead shrimp was removed with a piece of sterilised aerator tubing. Very slight aeration commenced on 20th November using a sterilised air stone and tubing. On 3rd December one dead fry was found on the surface and was removed but all others appeared in good condition. At 9 a.m. on December the fry were not active but were still eating and had definitely grown since hatching. By the evening only a dozen fry could be seen and the casualties were removed. At 8 a.m. on 5th December there was no trace at all of the remaining fry, the bodies presumably having dissolved. The pH was then 7.0 (neutral) and there were 6 degrees German Hardness.

Because of the healthy condition of the fry for 8 days it seems that the light and temperature conditions were satisfactory. The temperature had fluctuated between 72 and_ 78 degrees F. I am at present, assuming that the loss was due to pollution and change in pH and hardness caused by the dead shrimp and the fry in the tank and hope that, if further hatchings occur, smaller quantities of shrimp can be fed, perhaps at more frequent intervals, in order to try to avoid sudden death. It also seems that the smaller fry, which were those swimming jerkily, were unable to take shrimp, and I wonder if in the natural state there is some type of microscopic food for the fry during their first day or two.

An article in a recent "Aquarist" by a gentleman who apparently supplied Neons on the Continent at the rate of 30000 per month recommends Infusoria in small quantities for the first 3 days but fails to state what typo of Infusoria !!

At the time of writing I have 2 spawnings from 2 pairs both obtained on the 3rd morning after they were placed in the breeding tanks but I must wait a further 2 days before the truth will out.

THE "WILHELMA",STUTTGART,

... by N. Sellers.

Part 1.

As many of you will be aware, I have in the past had the good fortune to be able to travel the highroads (excellent) and byroads (often better not mentioned) of the European continent by virtue (convenience) largely of accumulating friends and relations in various regions.

Having, over the years, improved my knowledge of the German language by frequent thumbing through a now rather grubby dictionary, I ventured a not particularly insignificant sum in procuring, with the kind assistance of the local bank, the monthly delivery of D.A.T.Z. -West Germany's journal for Aquarists.

It was in this knowledgeable and well illustrated periodical that I first became aquaintcd with the Wilhelma Zoo in Stuttgart, as an article on new fish arrivals there appears every month in the latter pages of each issue. As the subjects mentioned wore confined to marine species, I of course presumed that this was one of the Zoo's specialities.

Having seen numerous coloured and black and white pictures of marine fishes with their infinite variations of colour and shape I was naturally curious, as I had not seen living specimens apart from a few sea-horses from time to time, to see them 'in the flesh', particularly as I have a rather doubting mind and could not conceive many of the pictures I saw as being other than a 'fake-up' of brilliantly painted plastic models suspended in water. How very wrong I was, I was to learn later, for the unbelievable beauty of colour shade and pattern, of bizarre shapes ; and behaviour are in fact a reality.

During the early days of July last year, as I was nearing Stuttgart on the Autobahn leading from Karlsruhe to Munich, the puzzle of queer fishy shapes again came to my mind and I was mentally goaded into physically breaking my journey at the next turning. After some detours, one via a tram depot, I managed to find the not very externally imposing, and non-signposted, walled enclosure called the 'Wilhclma'. On paying my 2/6 I passed through the turnstiles and found myself in the Tropical House. This is an enormous greenhouse housing the largest collection of cactii orchids, tropical trees and plants I have ever seen, with bananas and pineapples for the 'picking', and one could even sit beside an indoor pool in a tropical forest setting.

The end of the Tropical House aptly merged into the entrance hall of the newly erected 'Interim-Aquarium' which was opened to the general public last Easter,enabling tho viewing of fish hidden from the public eye during rebuilding work, until the eventual permanent Aquarium is completed.

The present building is constructed of natural finish grey concrete and asbestos, being rectangul r in shape 180 feet long and 27 feet wide with a low mininal illuminated ceiling. Almost the sole lighting is within the tanks which are built into the walls on either side. One passes via three vivariums containing half grown crocodiles into the rather 'eerie' darkness of the Aquarium - a sinister 'welcome',

On the left of the hall are the Mediterranean 'marines' and the tropical freshwater fishes, and on the right the tropical seawater fishes. There are 55 tanks each containing from 40 to 300 gallons. At the end of the 'hall' are two vivariums containing tortoises, one variety of which lures its prey by means of the emanation of a cheese-like smell from below a soft shell projection above the head; the victim, thinking he has a delicate morsel before him takes a bite, and as quick as lightning a mouth protrudes and he or she is gobbled up.

The most fascinating creatures on view" might be considered to be the five foot long electric eel which arrived at the zoo eight years ago as a two foot specimen and is able to stun a man with its electric discharge, an electric catfish, an albino African lungfish, giant Gouramis, and a shoal of Piranhas. The latter certainly did not look as fearsome as portrayed, being a dull silvery fish about four inches

in length, but as they occur in huge shoals in nature and have razor sharp teeth, there is no doubt some truth in the legends surrounding them.

There was little new in the way of freshwater tropicals apart from a number of Black Neons (*Hyphessobrycon Herbert axelrodi*).

As regards the marine exhibits the most striking for length of life in captivity are a shoal of Wimpelfish imported in 1957. There are over 200 examples of 90 species of marine tropicals on view. Many of the marine tanks contain Hermit Crabs, and numerous species of sea anemonies whose bright colourings, diversity in form and delicate appearance are barely exceeded by the fish themselves, creating a flowerlike landscape. Additional ornamentation of the tanks consists of natural rockwork, mmerous specimens of coral and here and there clumps of *Calerpa* - an advanced form of algae.

The nearest relatives of the sea-anenonies are the corals, these being nothing more or less than sea-anemonies which have united together in colonies creating skeletal structures from chalk, silica and tissue breakdown, the commonest form of which is sponge coral. Many of the mountain ranges of today consist of the chalk deposits from coral formed many millions of years ago. Some corals are brightly coloured in orange, lemon or red, this colouration being due to deposited remains of hermit crabs who have taken shelter therein. In deeper ocean regions - over 250 feet a branched coral is found. Care has to be taken in the collection of sponge coral as it is liable to breakage on impact and also if exposed to rapid changes in water pressure.

Interesting occupants fron the bed of the Mediterranaen are the tubewoms which build chalk 'flight holes' in the sand to which they quickly resort when frightened.

Highly developed plant life cannot exist in sea water and the only vegetation suitable for marine aquaria is the advanced form of algae already referred to - *Calerpa*. This multiplies rapidly under favourable light conditions and helps to remove nitrogenous waste products from the water. Octopus and several types of crab are on show, as well as Seahorses with which the Zoo has had considerable success, the decisive factor being the rapid transport of perfect specimens from sea to tank.

The Wilhelma houses the largest collection of tropical marine fish in Europe. Its central positioning enables the greatest number of people on the continent to visit it without undue travelling difficulties but its being some 300 miles from the nearest source of natural seawater has had its problems in the past, as also has the long journey by train froi the ports of arrival for the fish.

The fish are now imported by air taking two days to travel from India. They are packed in plastic bags half-filled with seawater and half with pure oxygen. The latfeer gives the fish ' oxygen-shock` leading to slower breathing, enabling the 'air' supply to last the whole journey

This is as much a gamble of tine, for a few hours delay means the loss of the whole consignment, as of temperature, for this can result in freezing of the fish in winter or boiling or asphyxiation in summer.

TO BE CONCLUDED IN NEXT 1SSUE.

GENETICS by G. Hedger.

(This is the first of a series of three articles by our former Hon. Secretary. Later articles will include the topics of sex-linkage and line breeding - Ed.)

Genetics is a subject that most Aquarists think is beyond them, but a basic knowledge of the laws of inheritance are essential to all who are interested in breeding livebearers. I have read the report on your recent Table Show and on the poor quality of many livebearers and Platies in particular, also the erroneous ideas that most Aquarists have in blaming inbreeding for the poor size of their stock.

Indiscriminate inbreeding can only produce poor stock; controlled inbreeding (linebreeding) is the only way to make improvements. I will now try to confuse the issue still further by trying to simplify the subject of Genetics.

Genetics is the study of inheritance, and was first started by an Austrian abbot, Gregor Mendel, about 100 years ago. Mendel's experiments were carried out on the various character istics of plants. For all his experiments he used culinary peas, he used plants varying as much as possible in various characteristics, i.e. sex, colour, etc. He found various constant ratios of the difference in the same charateristic in the number of offspring when two plants were bred together, and on these ratios he founded his laws. Each of the two parents contribute equally to the hereditary constitution of the offspring.

He found that if he crossed a tall plant with a short plant all the offspring from the first cross were tall. If he then selfed these, i.e. bred brother to sister, he got a different ratio of tall plants to short plants.

Tall X Short P
↓
Tall F.1

Tall X Tall F.1
↓

↓ ↓
3 Tall 1 Short F.2

On investigating the F.2 generation he found that they did not behave the same way on selfing. All the short ones bred true to shortness; but of the tall ones, only one in three bred true to tallness, the others acted as did the F.I generation, that is breeding three tall to one short.

From these experlments Mendel deduced that the Gametes, "sex cells" (male sperms or pollen, and femalc ova or ovules) carried something which was responsible for the appearance in the adult plant of the particular character. This 'something' he called a Gaminal unit (these are now known as Genes), and he maintained that these Genes remained unaltered in the Gametes, even when the character did not appear in the adult, as in the unit for shortness in the F.1 generation. From this he stated the law:- 'That of a pair of contrasting characters only one can be represented in a single Gametes."

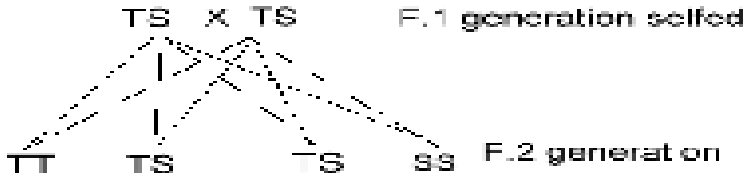
It will now be seen that the factors for tallness and shortness can be present in the same adult} when the tallness masks the shortness it is dominant to shortness, thus making shortness recessive to tallness.

I will try to simplyfy this with a diagram:-

Tall	X	Tall	P generation
TT		SS	
	↓		
	TS		F.1 generation

Although the plants of the F.I generation vill all look tall, genetically they are tall plants carrying the factor for shortness in a hidden form. In other words the tall factor which is dominant is masking the short factor which is recessive.

I will try to simplify this with a diagram; -



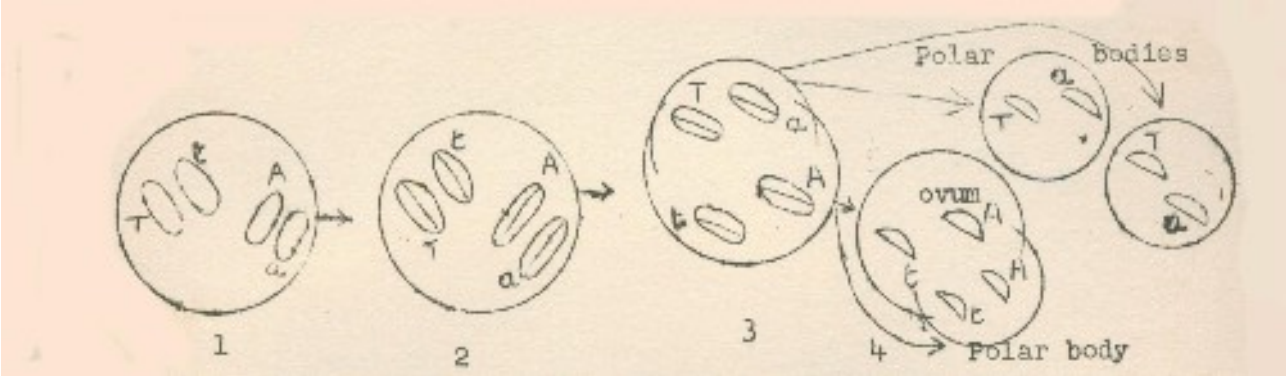
It will be seen that in the F.2 generation there are 75% tall plants to 25% short plants of these 75% tall plants, only 1 in 3 will be genetically pure tail (double dominant) and the other 2 will be tall masking short as in the F.1 generation. The short plants being recessive are genetically pure and will breed true if selfed.

To simplify things I have used the symbol T for tallness and S for shortness, but it is usual in Genetics for the capital letter to be used for the dominant factor,,and the small letter to be used for the recessive form. Thus a tall plant should be TT and a short plant should be tt.

The Chromsome Theory

The cell is the unit of life of all living things are composed of cells. With few exceptions all cells have a specialised portion, the nucleus, which is the controlling centre of the cell's activities. Under the microscope the nucleus is seen to contain parts which appear as rods or banana shaped pieces. These are chromosomes, and, generally speaking, each cell contains an exactly similar set. The important thing is that

chromosomes are always present in pairs, except in the gametes (sex cells) which only contain one of each pair.
Though the chromosomes cannot be the genes, there is every reason to believe that they are carriers of the genes, or that the genes are a small portion of the chromosomes.
The process by which the sex cells receive only one of each pair of chromosomes is known as meiosis. I will try to explain this process with a diagram.



1. The cell in the ovary, showing two pairs of chromosomes.
2. The chromosomes divide but halves do not separate
3. The reduction division, one chromosome of each pair (either one) goes to the end of the cell, the other goes to the opposite end, and the cell divides.
egg-
4.. The half chromosomes (chromatids) separate and the daughter cells divide. One of the four final cellsbecomes the ovum (shell), and the other three (the polar bodies) degenerate.
The ovum may contain any of the four following combinationsj-Ta. TA, ta. tA.
In the male the same process of meiosis ensures that each sperm contains only one of each pair of chromosomes. The or.ly difference is that in the case of sperms, all four final nuclei in each meiosis enter gametes; there are no polar bodies.

TO BE CONTINUED.

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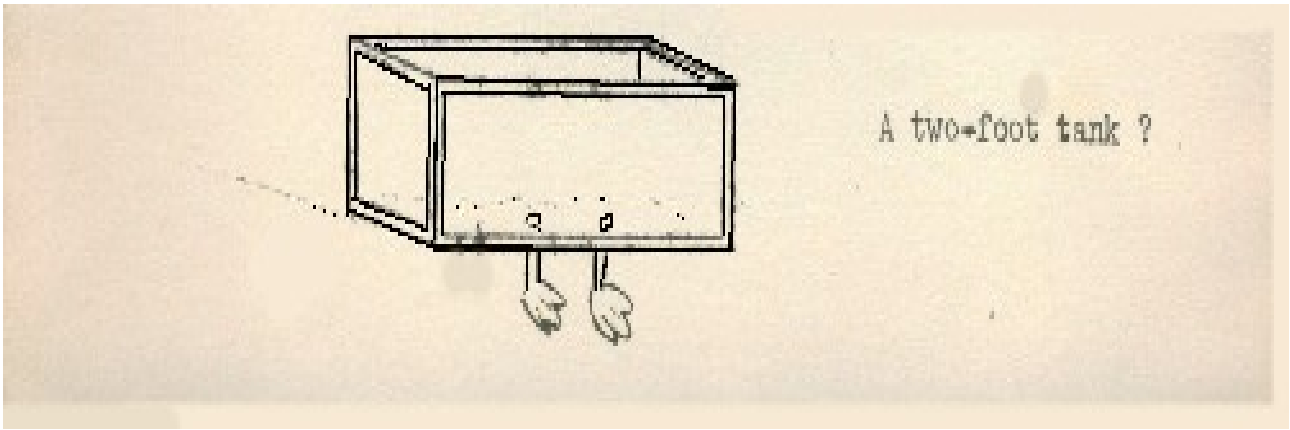

THE SOUTHEND, LEIGH AND DISTRICT AQUARIST SOCIETY.
REVISED RULES.

1.- That the Society shall be known as the "Southend, Leigh and District Aquarist Society" incorporating Pondkeepers, Aquarists and Herpetologists.
2,- That the aims of the Society shall be for the promotion and furtherance of all aspects of Pondkeeping, Aquaria and Vivaria and to give mutual help to members.
3.- That the Annual Subscription for Senior Members shall be 7s. 6d. All Subscriptions fall due at the Annual General Meeting.
4,- That in cases of husband and wife joining the Society a joint Annual Subscription of 10s. 6d. will apply.
5.- That new members shall pay an Entrance Fee of Is. upon applying for membership,
6.- That all applicants for membership shall be over fifteen years of age.
7.- That all persons dcsirir.g membership of the Society shall submit the prescribed application form duly completed and bearing the Proposer's signature to the Honorary Secretary through the member proposing the applicant, for consideration by the Executive Comr.ittee. The Entrance Fees of unsuccessful applicants will be returned. Successful applicants will be notified and must remit the proportion of the Annual Subscription due.
8.- That all Annual Subscriptions shall be paid within one month of the Annual General Meeting. All members not having paid by then will be deemed to have lapsed their neubership.
9.- That Members lapsing their subscriptions will be deemed to have resigned membership. Lapsed members upon rejoining will be required to fulfil the same conditions as a new neriber,
10.- That each member shall be considered a subscriber for the ensuing year unless he sends notice, in writing, of his intention to resign to the Hon. Secretary not later than one month after the date of the Annual General Meeting.

At the Annual General Meeting held on December oth, 1953', Rules 11 and 12 were amended to read as follows:-

"That the Executive Coraiittee shall consist of the President, Vice-president, Honorary Secretary, Honorary Treasurer, and four other members. Five membcrs shall form a Quorum. The Executive Committee shall have power to Co-opt" .

13.- That all Officers of the Society shall retire annually, and be elected at the Annual General Meeting. Two Honorary Auditors shall also be appointed at each Annual General Meeting.