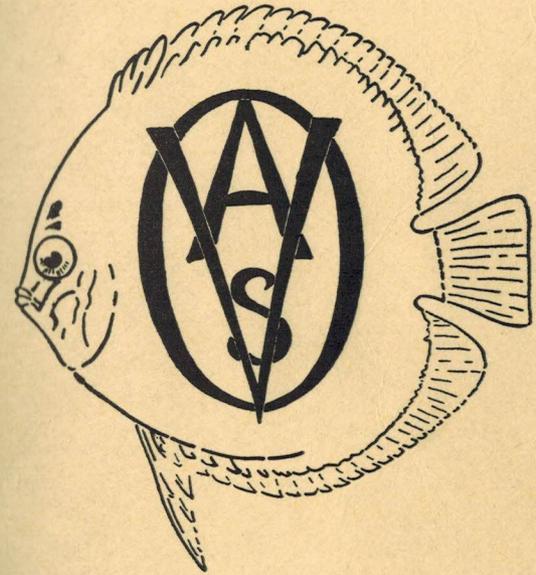


VAS NEWS



OFFICIAL PUBLICATION

OF THE

OTTAWA VALLEY
AQUARIUM SOCIETY

OTTAWA VALLEY AQUARIUM SOCIETY
[REDACTED], OTTAWA 3,
ONTARIO, CANADA

THE OTTAWA VALLEY AQUARIUM SOCIETY

MEETINGS

JUNIOR SOCIETY

Thursday, June 19th, 7.00 PM
Thursday, September 18th 7.00 PM

SENIOR SOCIETY

Thursday, June 26th, 8.00 PM
Thursday, September 25th, 8.00 PM

JUNIOR AND SENIOR SOCIETY PICNIC

Wednesday, September 10th - if raining
Thursday, September 11th.

NO REGULAR MEETINGS DURING JULY AND AUGUST

Regular meetings are held in the Medical Building, University of Ottawa, Room 237, Nicholas and Somerset Streets, Ottawa.

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"PLEASE PATRONIZE OUR ADVERTISERS"

THE OTTAWA VALLEY AQUARIUM SOCIETY

The Ottawa Valley Aquarium Society was founded on the eleventh day of March, nineteen hundred and fifty-four.

The object of this Society is to further the study of aquarium life, the spreading of information regarding it, and the promotion of good fellowship among fanciers of aquarium life.

The Ottawa Valley Aquarium Society consists of two bodies, a Senior and a Junior Society, each operating independently. The Junior Society was founded on the fourteenth day of April, nineteen hundred and fifty-five.

Membership is open to all persons wishing to acquaint themselves with this hobby. Each person may attend two meetings and on the third meeting, application for membership, accompanied by the membership fee, shall be made to the Membership Committee.

The Ottawa Valley Aquarium Society publication "THE OVAS NEWS" is published by the Society, a non-profit hobby organization, and copies made available to all members. Subscription rate for non-members is \$2.00 per year.

The opinions, statements, and view points expressed in The OVAS News are those of the authors and not the Society.

Advertising rates on request from Editor.

UNLESS OTHERWISE INDICATED, THE CONTENTS OF THE OVAS NEWS MAY BE REPRINTED PROVIDING CREDIT IS GIVEN TO THIS MAGAZINE AND THE AUTHOR OF THE ARTICLE.

This Society is a member of The International Federation of Aquarium Societies (TIFAS).

THE OTTAWA VALLEY AQUARIUM SOCIETY
OFFICERS AND DIRECTORS

Senior Society Officers

President: Mr Harvey Wittenberg
Vice-Pres: Mrs Clare Weitz
Secretary: Mrs Barbara Johnson
Treasurer: Mr Dan Jeffrey

Senior Society Directors

Finance: Mr Phil Curry
Membership: Mr Ralph Jackson
Programme: Mr Roger Trottier
Show: Mr Geo Bowie
Magazine: Mr Harvey Wittenberg
Junior Soc: Mr Pieter van der Brugh

Senior Society Librarians

Mr Gordon Croll
Mr Bill Gall

Junior Society Officers

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Magazine: Joe Marshall

Junior Society Librarians

Joe Marshall
Larry Neumann

.....
OTTAWA VALLEY AQUARIUM SOCIETY CONSULTANTS

Area No 1 Mr Edgar Parisien
Area No 2 Mr Geo Bowie
Area No 3 Mr Ken Craig
Area No 4 Mr Jack Dirks

TIFAS REPRESENTATIVE

Mr Edgar Parisien

IMPORTANT NOTICE

The Society will close for the summer during the months of JULY AND AUGUST. No issue of the OVAS News will be made during these two months.

During our holidays don't hesitate to call the Society Consultants, Executive Officers or Directors for any information regarding the Society, hobby or our show to be held in August.

The members who are entering aquaria, fish, and helping out in the show will be kept informed of any further developments. If at any time you wish to obtain any information regarding the show call Mr Geo Bowie at [redacted].

DURING...JUNE...JULY...AUGUST

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TANKS THAT CATCH THE EYE
by Dr. Carl, "Fin-Fare", Victoria
Aquarium Society, Canada.

For a public display, the goal of each exhibitor should be to set up a tank that will catch the eye - one that both commands attention and gives pleasure. His task then, is to create an attractive picture. Just as the Artist places paint on canvas following certain principles (sometimes obscure to the beholder!) so the aquarist uses fish, plants and accessories within the confines of the tank. Although the hobbyist is working with living things and in three dimensions, he should follow the same rules of colour combination and composition as are followed by good artists.

While fish are an important part of the picture, they are by no means the most important part. Plants, sand, stones, and other accessories are equally important and therefore all must be combined in the proper way to get the maximum effect. Here are a few hints:

1. Select plants and accessories according to the size of the tank to be used and also according to the fishes to be displayed.
 - (a) Plants which are too large for the tank give a crowded look and dwarf the fish.
 - (b) Plants that are too few in number leave too many empty spaces.
 - (c) Avoid large shells or rocks which may dominate the picture.
2. Place plants and accessories to make a pleasing, well balanced picture. Set the stage for the fish, as it were:
 - (a) Lay out the tank so that there is a centre of interest - a stone, a group of stones, a clump of plants, as the focal point but avoid placing the centre of interest dead centre in the tank. (Cont'd page 6)

(b) Avoid seductive mermaids, bursting treasure chests and bright baubles which pull the eye away from the fish or the tank as a whole.

3. Select fishes carefully:

- (a) In a community tank don't succumb to the temptation to include as many species as the tank will hold. The result is confusing to the beholder.
- (b) Select species to be shown together on the basis of size as well as color and swimming habits.
- (c) Avoid including fish in poor condition. One sway-bucked guppy can spoil a tank full of prize fish.

4. Use proper light in proper place. Experiment to find the right amount of light needed and also the right position for the light. Improper lighting can spoil an otherwise good tank.

5. Make heaters, thermostats, filters, thermometers, etc, as inconspicuous as possible. Ideally they shouldn't show at all; they are not part of the picture.

Observe all these rules and the judges will have a tougher time than usual picking out the winners!

ADVICE

Easing the engine to a stop at a water tank, the old engineer briefed his green young fireman. The fireman climbed to the tender, as per instructions, and managed to bring the spout down all right. But somehow his foot tangled in the chain and he floundered right into the tank. The engineer regarded him and his plight with a jaudiced eye.

"Just fill the tank with water, Sonny", he drawled.

"No need to tramp it down".

IN MY OPINION
by Mr Edgar Parisien, OVAS Senior Society

If you are thinking of placing your tropical fish outdoors for the summer preparations should begin about now.

A question often asked at this time of year "How do I prepare driftwood for the aquarium"? Driftwood should never be introduced into the aquarium as it comes from the lake or river. First, make sure you choose a piece that is really water logged. Cut it to the required size, making sure that when it is set in the tank the cut can not be seen. Second, drill a few holes on the side you intend to face down then plug these holes with lead. Third, boil the whole mess to make sure no harmful germs are still alive. Your driftwood is now ready for the aquarium.

Sad Sack called the other day and said he had bought some fish, put them in his tank, and now all the fish are dying. In my opinion Sad Sack should listen to the advice of an old fool who knows better now. Isolate newly bought fish for at least a week before putting them in the aquarium.

Some hobbyists do most of their fish buying in the fall. I like to buy them in the spring because live food is not so hard to come by and it does wonders for the fish.

Do you know that pin heads or even small minnows are very good food for your fish. They are plentiful and easy to net.

In my opinion all members should make an effort to enter a tank in our show at the Central Canada Exhibition. We should all start planning our setup now.

PLEASE PATRONIZE OUR ADVERTISERS. THEY
HELP TO KEEP OUR OVAS NEWS ROLLING.

OVAS TROPICAL FISH SHOW
CENTRAL CANADA EXHIBITION
by Mr Geo Bowie, OVAS Senior Society

Our 1958 display of tropical fish will be held in the Horticultural Building during the Central Canada Exhibition, Friday, 22nd August to Saturday, 30th August.

With your OVAS News you have a copy of the Society Rules for our show and an entry form. We ask that each member return the entry form to Mr Geo Bowie, [redacted], Ottawa 1.

Important dates to be remembered are:

SUNDAY, AUGUST 17TH

Show Committee to prepare stands and transport equipment to Horticultural Building.

MONDAY, AUGUST 18TH

Show Committee will set up the stands etc.

TUESDAY, AUGUST 19TH and WEDNESDAY, AUGUST 20TH. Members will set up their aquaria.

THURSDAY, AUGUST 21ST

Fish to be placed in aquaria no later than 9.00 PM. Show Committee will complete decorations, etc.

FRIDAY, AUGUST 22ND

Show officially opens at 10.00 AM. Attendants required.

SATURDAY, AUGUST 23RD

Fish and aquaria will be judged. (The judging may take place Friday evening after 10.00 PM.) Building will be open to the public at 10.00 AM. Attendants required.

SUNDAY, AUGUST 24TH

Exhibition closed. Members, with passes, may enter the building to feed their fish.

(Cont'd page 9)

MONDAY TO SATURDAY (25TH - 30TH AUGUST)

Building will open at 10.00 AM.

Attendants required.

SUNDAY AUGUST 31ST

Aquaria and fish to be removed from the stands by 2.00 PM. At 2.00 PM the Show Committee will dismantle the stands, etc., and return equipment to place of storage.

The following information will be of help to you:

LOCATION - The space allotted for your aquarium will be clearly marked with your name and a number.

ATTENDANTS - A great many members will be required to serve as attendants. This is not a difficult job and you can help greatly by volunteering to serve (even if only a couple of hours) and assist in the following:

1. Insure the young children do not touch the aquaria.
2. Answer any questions about the hobby and the Society. (you do not have to be an expert for this job). The names of the fish in each aquarium will be listed.
3. Obtain the names of anyone who is interested in our hobby in order that we may send them a notice of our meetings.

The suggested time schedule for attendants is:

10.00 AM to 2.00 PM	(morning)
2.00 PM to 7.00 PM	(afternoon)
7.00 PM to 10.00 PM	(evening)

Attendants are asked to insure that someone is in attendance during the meal hours.

MEMBERSHIP - Membership in the Society, for the remainder of the year, will be offered during the show. Senior members \$1.00

(Cont'd page 10)

(married couples \$1.25) and Junior members .25¢.

PASSES - Attendants and members entering their aquaria and fish will be given passes to enter the exhibition grounds. All members, including automobiles, must enter by the HOLMWOOD AVENUE CATTLE GATE. (unless otherwise notified). Use side entrance to Horticultural Building (left turn entering gate).

ELECTRICAL OUTLETS - Outlets will be provided for each aquarium. Each aquarium must have a cover and light standard (with bulb).

AERATION/FILTERS - Aeration and Filters are permitted.

HEATERS - It is advisable to provide your aquarium with a heater in the event there is any great change in the temperature.

FEEDING - You may feed your own fish or you may leave instructions to the attendants or show committee. Food will be supplied by the member.

WATER - Tap water is available and there will be a limited supply of aged water (first come first served). If you are able to transport aged water to the show, please do so.

TRANSPORTATION - If you require assistance in transporting your aquarium and equipment contact Mr Geo Bowie or a member on the show committee.

At our regular June meetings (Junior and Senior), you will have an opportunity to ask any questions regarding the show. The trophies will be on display.

Members of the Show Committee, who are depending on your support, are:

(Cont'd page 11)

Mr Geo Bowie	(Show Director)
Mr Jack Dirks	(member)
Mr Alan Griffin	(member)
Mr Ben Davis	(member)
Mrs Flo Trottier	(member)
Mr Leslie Badham	(member)
Mr W.E. Ledoux	(member)
Richard Brown	(Junior Society Show Director)

JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

THE AQUARIST'S CALENDAR
"The Aquarium"

JUNE - June the month for outdoor activity! If you did not build an outdoor pool a few months ago, by now you are wishing you had. In June a pool really begins to come into its own.

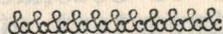
The beauty of outdoor pools is of course the prime reason for their existence, but there are a number of secondary values. Perhaps the most important of these is the opportunity for raising tropical fishes under spacious conditions. If the water temperature stays between the extremes of 68 and 90 degrees, almost any of the tropicals will thrive outdoors. With such conditions they require little or no attention, even when it comes to feeding. The live-bearers do especially well out-doors in thickly planted pools. The pool is an ideal place for fishes when the owners go away on vacations, as they generally find enough food to sustain themselves.

If you are one of the few who has difficulty raising snails, try them outdoors. In the average pool they are even more prolific than in an aquarium.

(Cont'd page 12)

There are a number of pool enemies that must be watched. The most destructive of these are fish-eating birds, frogs, dogs (the ones that like to sit in water on a hot day), fishing cats, water beetles and children. Children are mentioned last, not because they are least, but rather so that they can be emphasized. Few creatures can do more harm to a pool than youngsters with an ample supply of stones or with a big "stirring" stick.

Just as June is the month of weddings for humans, fishes, too, are moved to amorous actions. How often aquarists are surprised to find a pair spawning right in the community tank. If the fish are valuable, quick action is necessary to save the eggs. Bubble-nesters are easily removed by carefully placing a bowl under the nest and lifting the whole thing out. If the spawn has been deposited on plants, remove the whole plant to another tank. With very valuable fish, the best solution is to quietly remove all but the breeders from the tank.



JULY - Each July we warn our readers that excess heat is harmful and often fatal to fishes, and each July a number of our readers fail to heed our plea. The fact of the matter is that any time water temperature goes above 80 degrees, most fishes are uncomfortable. When the temperature exceeds 85, all fishes suffer. The Chief cause for this distress is that warm water holds less oxygen than cold water. Beyond 80 degrees the oxygen supply is likely to be dangerously low.

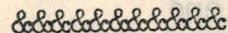
There are several steps that can be taken to minimize the danger:

1. Keep sun entirely off fish containers. Any opaque shade will suffice for this purpose.

(Cont'd page 13)

2. Glass covers should be removed and replaced by screens or nothing. Glass covers slow down evaporation, an important means of cooling water.
3. Strong aeration. This is the most effective means of reducing the danger of heat. In most cases it solves the problem very well. But many aquarists do not have a large enough air supply to aerate all tanks. Hence, the mentioning of other aids.
4. Keep fewer fishes per tank. Spread them out to as many tanks as possible.
5. Partial changes of seasoned water every other day or so are beneficial.

As daphnia diminish, the supply of mosquito larvae fortunately (for aquarists) increases. We have previously mentioned that mosquito larvae are second to none when it comes to nutritive value, but they have two other advantages that are pertinent during the hot months. Since they must go to the surface for air, they do not compete with the fishes for the dissolved oxygen in the water as do some other live foods (daphnia, for instance). Since warm water is already low in oxygen, this is an important point. Second, they stay alive until eaten, whereas daphnia and most food worms do not live well in an aquarium.



AUGUST - During this month of vacations, the problem of feeding fishes always comes up. Several references to this problem have been made in our pages recently, but it will do no harm to summarize it briefly again here.

Fishes are capable of living for long periods of time without food - providing they are in good condition at the start of the vacation.

Some aquarists make up packets containing

(Cont'd page 14)

just enough food for one day, to be dispensed by a friend. This usually works well, but things do sometimes go wrong, and if the friend is a complete novice, he will go merrily on with the feedings, unaware of condition changes. The result will be foul water and dead fishes. Unless the friend is familiar with the principles of aquarium management, no feeding at all is the smaller risk.

A pleasant vacation pastime is a hunt for rocks suitable for aquarium use. Over various parts of the country there are to be found minerals of great beauty. Unless the actual composition is known, there is considerable danger in just putting them in with fishes. If there is the slightest doubt about a rock, or any ornament, for that matter, it should be placed in a container with some inexpensive fishes for about two weeks. If these fishes suffer no ill effects, it is safe to place the material in an aquarium.

A surplus of fishes often becomes a pleasant problem about this time of year. While most aquarium stores are anxious to buy up good locally raised stock, why not reserve a few of them to be given away to someone who is not yet an aquarist? Many a hobbyist has been initiated through the kindness of a friend.

Toward the end of this month is the time to thin out plants. There is still quite a bit of growing time left before the plants go into their winter rest, but if they are thinned out now, the old plants and the removed ones have a chance to become re-established before the rest period.

AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER

Man proposes on bended knee and takes years to get on his feet again.

SENIOR SOCIETY MEETING JUNE 26TH

HIGHLIGHTS OF THE JUNE MEETING ... "A Fancier's Selection of Mostly Rare Fish" - 60 color slides by Mervin Francis Roberts. This series ranges from champion guppies to the latest importations. Includes many old classics that are seldom seen, but which deserve the attention of serious aquarists. Comments on these slides were written by Mr Roberts, who has kept and bred rare fish for over 25 years. Mr Edgar Parisien will give the commentary...The Fish of the Month will be the CARDINAL TETRA (male or female) ...Mr Jack Dirks will give an interesting talk on "Decorating the Aquarium"...A talk on the OVAS Tropical Fish Show by Wilf Doucette which will also include a short film...REMEMBER THE DATE...JUNE 26TH.

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FOR THE TROPICAL FISH HOBBYIST

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COME IN AND BROUSE AROUND

.... Otto Flegel, prop

PRESIDENT'S LETTER
Senior Society

At our last meeting you were asked to give your zone-number to Mr Ralph Jackson. To my surprise the majority did not know the number so this information was obtained from the postal officials. If we have made an error in listing your zone-number on your society correspondence then correct this error at the June meeting.

Our picnic committee held a meeting June 4th and have decided to hold our annual picnic on September 10th this year. Notices will be mailed to all members.

There is a lot I could say about our annual tropical fish show to be held during the Central Canada Exhibition but the most important to mention is that we require your support by entering an aquarium or serving as an attendant. It is up to you whether our show is a success or failure.

A very important duty to perform is the mailing of the entry forms to Geo Bowle. This is not much to ask, yet last year 8 entry forms out of 86 senior members were passed to the committee. This may mean little to the member but if you were in Mr Bowle's shoes it is a big job, an additional one, to phone each member (total 102 Junior and Senior). The number of aquaria to be entered must be given to the Exhibition Officials so they may determine the space required. This information is required by July 31st.

During the summer months your Society Consultants, Executive Officers and Directors, will assist you in any difficulties that you are having with the hobby.

A letter was just received that Mr W.L. Whitern, F.Z.S., President of the Canadian Aquaria Society and Chairman of the Board of Governors of The International

(Cont'd page 17)

Federation of Aquarium Societies, may visit our Society during the June meeting. This will be the first time a Chairman of TIFAS has visited our Society and we will all be looking forward to his visit. Mr Whitern will probably give a short talk regarding The International Federation of Aquarium Societies and bring us up to date on the activities. As members of OVAS you are a member of TIFAS and this talk will be of interest to all.

This is the last issue of the News until September and our last meeting for the summer. It is my sincere wish that all members have a very enjoyable summer and holiday. I will look forward to seeing you at our annual display of tropical fish at the Central Canada Exhibition, August 22nd to 30th, and at our first meeting in September.

Harvey J. Wittenberg
(Harvey J. Wittenberg)



HAVE YOU
HEARD
THE LATEST?

by Mr I. Whonoseall..

...there are some tropical fish stationed at Uplands who are now taking flying lessons. Ben Davis was surprised to see his black mollie take a flying leap from one tank to the other...perfect landing...
...will everyone (Junior and Senior)
(Cont'd page 18)



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surprise Geo Bowie by mailing your entry forms?...

...if you can think of some way of stopping Geo Bowie from winning the door prizes maybe we will have a chance...how can one be so lucky???...maybe the shock of receiving your tropical fish show entry forms will do the trick...

...our main speaker, Mr John Andrews, of the Canadian Aquarium Supply Co Ltd., at the Senior Society May meeting certainly had a nights work unpacking and packing all the equipment that was on display. Our thanks to Mr Andrews and the Canadian Aquarium Supply Co Ltd for a very interesting talk and display of aquarium supplies...

...talking about the right conditions for fish you better talk to Mrs Carroll... the conditions must be perfect for her angels because they keep on spawning and never seem to have a rest...

...Art Cobill is still looking for a female Betta...

...Father Legault is going to Michigan for completion of his thesis during the summer months...our best wishes...

...we are sorry to hear that Kay Welch



TROPICAL FISH HANDBOOK CATALOG

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FISH OF MONTH

Junior Society

"The Pencil Fish"

(male or female)

Senior Society

"CARDINAL TETRA"

(male or female)

Remember.. square jar no gravel no plants.

is in hospital...our best wishes for a quick recovery...

..."success of our swap sale"...Marcel Leduc purchased a gourami from the swap sale (owned by Clare Weitz) and 2 days after they spawned with a total of 2,500 young fry...

...for a 60¢ purchase at the swap sale Mr Spence should have \$60.00 worth of young fry as a result of purchasing moss plant just loaded with eggs...

...we are very sorry to lose a member and one of our tropical fish dealers Mr Percy McAdam. Mr and Mrs McAdam are closing up shop and moving to the United States... best of luck...

(Cont'd page 20)

...(this item is for those who make home-made wine - attention Mr Parisien)...try using your aquarium filter to filter the wine...Roger Trottier states there is nothing better...

...WE WELCOME AS NEW MEMBERS...Senior Society - Dr Robert Jackson and Mr G.E.R. Thompson. Renewal of membership - Mr Heinz Kroeger. The Junior Society welcome a new member - Cheryl Alston...

...Did you ever go to a rock and roll dance?...I did...the music in the joint was so bad that when a waiter dropped a tray full of dishes, everyone got up and started dancing...

.....:cheers.....:for now:::::

THE IDEAL CONDITIONS FOR SPAWNING
TROPICAL FISH

by Mr Edgar Parisien, OVAS Senior Society

Environment and the proper setting has much to do with the outcome of a spawning attempt.

In it's natural habitat, a pair of fish can find such a spot without going too far, however, in the aquarium the aquarist must try and provide such a place because the fish can only go as far as the glass. In other words, the aquarist should know something about the fish he or she is thinking of spawning. Such as, where the fish come from, whether in running streams or stagnate pools, whether they prefer shallow or deep water, do they lay adhesive eggs, free eggs, or floating eggs?

There are as many ways of reproduction among fish as you have fingers and toes,
(Cont'd page 21)

and that is what makes our hobby the most interesting in the whole wide world. Just to mention a few - we have the nest builders and its many variations - other egg layers and all the variations. Have you ever tried to count all these variations? Some lay free eggs such as the Zebras who come from creeks and streams and lay their eggs on a gravel bottom. Some lay their eggs among plants, usually fish from ponds or pools, which are adhesive eggs. For example, the Angel Fish will lay adhesive eggs which are placed carefully on a plant, the Jack Dempsey eggs on a stone and the Jewel Fish in a little cave, all who are members of the cichlid family. The Congo Cichlid either excavate under a flat rock or lay their eggs on the gravel.

There are some fish who lay their eggs out of the water such as the Copeina Arnoldi. The Black Line Tets and Nannostomus Anomalous lay their eggs near the surface. Some of the Panchax group lay their eggs in mud, or moss, and they must dry out for a period or they will not hatch. We even have egg layers who don't take any chances and carry their eggs in their mouth and of course the Medaka which carries its eggs on a string like a little bunch of grapes hanging from its belly. Some lay their eggs in the dark and others prefer various degrees of light.

There are many ways and spawning habits I could mention but this is only an article for the OVAS News and not a 1,000 page book.

Taking it for granted that the fish are in good spawning condition, the aquarists problem is to try and simulate the conditions a fish would look for in nature. That is not always possible, but fish will usually settle for a halfway measure if their physical condition is such they must do what comes naturally.

If your first subject is the Zebra you
(Cont'd page 22)

would provide shallow water (about 3½ or 4 inches) and the bottom of the aquarium covered with small gravel stones or marbles. The pair should be separated for a few days and introduced to the spawning tank the night before spawning. The aquarium should be set in a place where the morning sun will awaken them, and you can expect that they will be almost finished spawning when you have eaten your breakfast.

If you are thinking of *Nannostomus Anomalus* or White Clouds you just save some rain water. Syphon off the old water replacing it with some rain water. Place a number of floating plants, such as Water Sprite, and they will cooperate in their own good time.

The sexes of the Tetras and Barbs should be separated for a few days before attempting to spawn. Water should be fresh (about 48 hours) and PH about 6.8. The bottom of the aquarium should have a thin layer of fine sand and there should be a clump of greens in one corner. A bare glass bottom is very distracting to the fish because of the mirror effect.

If I were trying to spawn *Copeina Arnoldi* I would provide a piece of frosted glass slanting about 15 degrees and extended about 6 inches into the water.

Cichlids do not need any plants, in fact, they usually uproot all the plants before spawning. They seem to think there are enemies hiding some place.

Much more could be said in regards to spawning, habit and fish behaviour, but the real objective of this article is to put over the point that an aquarium should be set up to look natural and to obtain the proper conditions, in general, to suit the fish more than the aquarist. Some hobbyists think an aquarium looks very nice when it is decorated with mermaids and little

(Cont'd page 23)

castles. These are a detriment to the water condition insofar as it makes little corners that would harbour food and start a decomposition. I am sure that the fish do not appreciate this condition. I see many aquaria that are set up so unnatural that the fish look out of place.

Plants are not only beautiful but they are also useful, although not altogether necessary, even to the appearance of an aquarium. For instance, if you were setting up an aquarium for *Aquidens Portalegrensis*, Congo Cichlids, Jack Dempsey or most any Cichlids, aqua scaping would be done with stone. Try it some time and you will be pleasantly surprised at the effect.

Angel fish, Discus, large Barbs and Tets look good in a setting of Sword Plants and the larger Cryptocorines. *Vallisneria*, *Sagittaria* and small Cryptocorine show up the smaller fish to advantage. A large community aquarium should contain a large variety of plants, including floating plants which add to the appearance, not to mention that many fish appreciate the shade from direct light.

In my opinion, stones (fairly large) help to make the aquarium more natural and more pleasing to the eye, but that is a matter of artistic taste.

Last but not least the gravel should look as though it came from the lake. You can practically duplicate the natural habitat but when you use crushed quartz (white sand) or any substitute that is unnatural in color you defeat your purpose.

Cleanliness is a must in living room aquaria but in my opinion it should not be over done.

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MINERALS AND ROCKS FOR THE AQUARIUM

by Robert Vincent "The Aquarium Magazine".

The naturalness which we all strive for in our aquariums can often be obtained by the addition of a few water-worn pebbles or broken stone. Even when the tank is perfectly balanced we often feel the urge to add some stones. Whether this is because of an overly developed collecting complex or just a love of beauty, we all fall victim to it sooner or later.

Stones picked up at random can do a great deal of damage in the aquarium. Often the well-meaning collector does not realize that these brilliantly colored rocks sometimes contain soluble minerals. This material may have been deposited in the rocks by slowly cooling ground water. Often when this has happened, the minerals may take the form

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of colored veins or crystals, which literally melt when placed in the aquarium.

The crust of the earth is made up of a great many elements. The most common found within the rocks carried home by the aquarium collector are iron, copper, and calcium. Some of you, unfortunately, have had experience with iron and copper in your tanks. Calcium, although less known, is just as dangerous. In small amounts it may be used as a natural defense against acidity in old-established tanks.

Volcanic stone, although often sold for use in the aquarium, cannot be used with safety. Lava, tufa, and ash contain high amounts of sulphur and other minerals. Obsidian, or volcanic glass, is lovely in the aquarium; however, it is extremely dangerous. A cut from its razor-like edges can do damage both to the fish in a tank and to the owner of the tank.

Stones which are safe in the aquarium are generally of great hardness. For convenience's sake, there is a quick rule of identification which may be used. This simple test for hardness is carried out by scratching the stone in question with a steel blade. If the blade cannot scratch the stone it generally is safe.

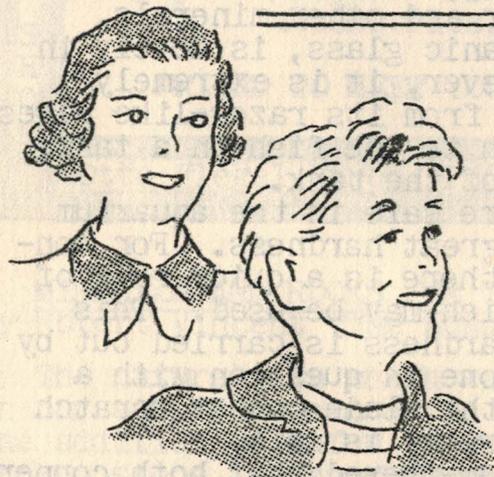
It should be remembered that both copper and iron can be present in such stones.

Safe stones used in the aquarium fall within four groups: granite, marble, feldspar, and quartz. Granite is composed of crystals of quartz, feldspar, and mica. The texture of this material is as varied as its mixed colors. Marble has all the colors of the rainbow. In texture it runs from smooth to granular and often appears in a soft form. Only the hard forms should be used. The softer forms may break down and release calcium in the aquarium. Feldspar has a very square crystalline form. Its color may

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vary from pink through yellow. Rare colors of green and lavender are sometimes found. Quartz varies from clear crystals, much like glass, to the heavy quartzite, a substance compressed from the sands of ancient seas by the earth. This type includes the majority of hard beach stones.

For the enjoyment of both the viewer and the viewed, a few stones are essential. They add that look of naturalness which we so admire. Armed with a few simple facts we can be confident of making the correct choice and increasing the enjoyment of our hobby.



OVAS
JUNIOR SOCIETY
SECTION

Editor:
Joe Marshall

A VERY IMPORTANT ITEM WHICH CONCERNS THE JUNIOR SOCIETY MEMBERS IS ON PAGE 8...

"OVAS TROPICAL FISH SHOW"

It is very important that we mail our entry forms to Mr Geo Bowie.

In the past years we have taken many awards. Last year we only had 3 entries in the show and we managed to take two honourable mentions.

Let us all make a real effort to enter an aquarium this year and win the OVAS trophies.

PRESIDENT'S LETTER
Junior Society

Because the executive is forever looking for ways to improve our meetings, we have come up with a new Jar Show system. We hope that it will meet with your approval.

Instead of having a common fish such as the Guppy, Swordtail or Betta as a subject, we will hear talks on the lesser-known fish. Even though you may not own one of these fish and consequently couldn't enter the Jar Show, you will learn a great deal more this way regarding the rarer types of fish.

The Jar Show was meant to inform the members rather than give away dollars to them for being the proud owner of a Guppy.

Since this will be our last meeting before the summer, I would like to see every member attend, and also to take this opportunity to wish everyone a happy vacation.

Gary Zumar
(Gary Zumar)

BREEDING CONGO CICHLIDS
by John Auer, OVAS Junior Society

The Congo Cichlid, the correct name for which is "Zebra Cichlid", is ordinarily a silvery fish with dull grey stripes. However, when about to spawn, it turns into a veritable rainbow of color. The vertical bars turn jet black, and the whole fish, especially the dorsal fin, is bathed in a pool of color ranging from blue to red-orange. The male can be distinguished by the long pointed dorsal.

When a pair of fish are mating, there is always fighting, which is true to most

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cichlids. The mating is climaxed by the locking of jaws.

In the breeding itself the female lays several hundred eggs on a piece of rock usually slate, which has been cleaned by the two fish. Then the male passes over the eggs fertilizing them.

The fish can be left with the young after breeding because they do not have the cannibalistic traits of other fish. After about two days, the eggs hatch, and what seems to be thousands of small eyes with attached tails can be seen. The female often takes the young into its mouth to clean (the first time I saw the female do this, I thought they were being eaten).

Since the young are quite large, the first food can be freshly hatched brine shrimp. The young grow quite rapidly, and when about the size of a neon, the parents should be removed.

At the same time, white worms can be fed to the young fish.

As these fish grow fast, they must have plenty of room. To avoid apoplexy I would like to suggest that congo cichlids should not be kept with angels.

SCENE: A Train compartment in Roumania during the war.

CHARACTERS: A German officer, a Roumanian Officer, an old lady, and a young attractive girl.

The train enters a tunnel. Passengers first hear a loud kiss, then a vigorous slap. Train emerges into the light again. Everyone remains silent, but the German Officer has a black eye.

The old lady thinks: "What a good girl she is, such a fine moral character.

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REASONS FOR DETERIORATION OF AQUARIUM PLANTS
by Bill Barham, "Waterlines" St Louis Junior
Aquarium Society, Inc, USA.

There are many reasons for deterioration of plant life in the aquarium, but the two main reasons are (1) lack of good light, and (2) overcrowding of the plants.

In cases where the deterioration starts in a seemingly well balanced aquarium, one in which the light is right and plant life has been growing luxuriantly, it is best to look to overcrowding as a possible cause of trouble. Things seem to be the same, yet the plants are not doing well, the water is seemingly clear, but it is slightly off color.

This overcrowding can come about by a natural birth increase, as in the case of the prolific livebearers such as moons, mollies, swordtails, guppies, etc, whose young will survive in a well planted aquarium, especially if the other fish are well fed. Thus an aquarium intended for 25 to 40 fish, ends up with 75 to 100 of all sizes. This results in an unbalanced condition due to the excess fish leavings. The plants can no longer absorb the excess amount of fish excrement and the water becomes very acid with a concentration of many chemicals.

Filtration can be of help, but that isn't the whole answer. First, most plants do not like the strong acid concentration caused by too many fish and even those that do, can't stand the uneaten and fermenting food that often falls around their roots. Under the gravel type filters have a tendency to draw such uneaten food down into the gravel, and as such filters seldom have charcoal to counteract the bacteria, trouble is sure to follow. A good outside filter with charcoal can do a lot towards counteracting the over acid condition of the water. Clean and

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changing the filter charcoal often will be of help.

The most sensible thing to do in order to save the situation is to reduce the fish population of the aquarium. Then syphon off all excess food mulm drawing off about 1/3 of the water with it. Replace this water with tap water that has been standing about 36 hours. Also, carefully top the sand left in the aquarium with about 1/4 inch of well washed filter sand. By doing this, you may save your plants and counteract any possible trouble to both fish and plants because of strong chemical concentrations from the uneaten food and too much fish excrement.

The other main reason for plant deterioration is that you must always have a good light in order to do well by your tropical plants. This is very simple but very important. If your plants are not evenly lighted they will turn yellow, spoil, and off-scent your aquarium. If your plants have too much light, they will turn brown, black, and then will die and also off scent your aquarium. A good fluorescent light placed above the aquarium will keep them in perfect growing condition, but be sure the fluorescent bulb is marked "warm White". White and cool white fluorescent bulbs may also be used with success, but not Daylight type bulbs.

IT'S ALL HERS

Policeman: "You saw this lady driving toward you. Why didn't you give her half the road?"

Unhappy driver: "I was going to, just as soon as I could find out which half she wanted."

HAVE YOU WRITTEN AN ARTICLE FOR THE OVAS NEWS

WATER

by E. Green "Canadian Aquaria Society".

Anyone who has ever been thirsty knows, if only in a narrow sense, what water means to life. Without it we die.

If you should ask a chemist what water is, his reply would likely be the chemical formula, H₂O, but water to the aquarist is more than two parts of hydrogen to one part of oxygen; it is H₂O, plus a lot of other things, things that the aquarist is concerned about.

Water heated to 90° is different water than it was at 70°F. For instance, it is warmer, has less oxygen dissolved in it, has a greater volume, and probably a slight difference in its acidity or alkalinity. For this reason, the aquarist should note the temperature of the water when testing it for pH, which is the chemical symbol used to express the degree of acidity and alkalinity.

Fresh tap water contains, in most cases, chlorine; a chemical placed in municipal water supply to destroy bacteria, rendering it safe for human consumption. Chlorine is injurious to fish as it burns their gill membranes, and in large enough concentration, will kill them. Therefore, it is recommended that a newly set up aquarium should be left to stand for two to three days, to allow the chlorine to escape into the air, before the fish are placed in it. It is then called "aged water". Water can be aged quickly by boiling it for ten minutes and then allowing it to cool.

"Old water", on the other hand, is aged water that has been in the aquarium long enough to establish microbe life.

The "old water" in every aquarium is the environment of many living organisms. The oxygen it carries supports a complex world

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of microbe, plant, and fish life, Organic wastes, such as uneaten food, dead fish or snails, dead plants, fish and snail wastes, etc., have an effect on this delicately balanced world, depending on their concentration.

Micro-organisms in the water feed on organic matter, using up oxygen, releasing carbon dioxide in the process. As long as they do not contribute too much carbon dioxide to the aquarium water, all is well. However, should the aquarist notice that most of the fish are gasping at the water surface, he may be sure there is insufficient oxygen, and the accumulated organic wastes, which may be the contributing factor, should be removed.

"Hard" and "soft" water are arbitrary terms often confronting the aquarist, and he may well ask - What is hard water? or soft water? Rain is soft water. It contains very little dissolved minerals. When rain water starts running over and through the ground, it carries with it dissolved minerals and minute particles of silt. The longer rain water is in contact with dissolved minerals, such as calcium, the harder it will become. This will explain why spring and well water is usually considered hard. The hardness of water is best expressed as ppm (parts per million) rather than in degrees of hardness (dh). ppm means parts of dissolved minerals compared to parts of water; for instance, a million gallons of water having one gallon of mineral dissolved in it would be expressed as 1 ppm. Similarly, one million gallons of water containing thirty gallons of dissolved mineral would be expressed 30 ppm. This is the only universally accepted method, since German degrees, French degrees, grains per U.S. gallon and grains per Imperial gallon,

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differ in their interpretation. According to Nathaniel A. Martin writing in the 1953 issue of the "Aquarium Journal", one German degree of hardness equals 17 ppm of calcium carbonate (CaCO_3) or 10 ppm of lime (CaO).

All fish, including tropical, will stay in chemical harmony with the surrounding water as long as they are able to adjust to it. Most tropical fish have a wide range of water hardness tolerance (W.H.T.), but some fish have a greater degree of W.H.T. than others. When this degree is exceeded, a condition develops in the fish known as chemical prostration. Fish suffering from chemical prostration are usually sluggish, do not eat as readily, intensity of colour is less, and they stop reproducing. They lose their natural resistance to disease and, if the condition is prolonged, will eventually die.

Chemical prostration is usually brought on by the aquarist who unknowingly keeps adding water to replace that which has evaporated, thereby adding more and more dissolved minerals to the aquarium. The addition of distilled water is the best remedy, or for temporary relief, remove half the aquarium water and replace it with aged water. The addition of rain water collected in, or near, cities is not recommended, because the rain, as it falls, picks up many dangerous impurities from the air, of these impurities, sulphur, for one, can kill fish.

There are now available water hardness test kits and water softeners which may make it possible for aquarists to control quite accurately the water hardness of their aquaria; making unnecessary the addition of distilled water. The aquarist should not be misled in thinking that water softeners remove the mineral content. What they actually do is change the hard ions to soft ions. (Cont'd page 34)

These water softeners, unfortunately, do not have any effect on dissolved metal in the water.

Certain dissolved metals, in large enough concentration, will kill fish. The worst offenders are copper and zinc. The only metals of which we know that do not have any ill effects are iron, pure lead and chromium.

We have, by no means, completely covered the wonders of water. The points discussed here are only to serve as a background; because conditions may arise in the aquarium that are deleterious to the life and health of our fish is one reason we should have a better understanding of water.

HOW TO RESET AN AQUARIUM

by Frank Osborn, "Nebraska Tropical Topics"
Nebraska Aquarium Society, Omaha, USA.

The first step in re-setting an aquarium is to remove all of the glass without breaking any, if possible. I have found that by putting warm water in the aquarium and letting it set for 15 minutes or half an hour, the cement tends to soften so as to make removal of glass easier. (If any glass is broken so that the aquarium will not hold water, submerging the tank in warm water will give the same effect). After you have removed all of the glass, take a putty knife and remove the old cement from the aquarium frame, and the glass. You are now ready to start resetting your aquarium.

First take a piece of cloth dipped in linseed oil and rub the oil around the inside edge of the frame where you are to place the first piece of glass. (The usual procedure is to install the large sides first, then the two ends and last but not

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least, the bottom). Take some cement and knead in the hands until pliable, then roll out into a strip about the size of a pencil. Place the strip of cement around the inside frame edge where the first glass is to be placed. Next take the piece of glass and rub the edge of glass that is to adhere to the cement, with linseed oil. Now place the glass on the cement and with slight pressure, press the glass into place. Then place on the glass a weight, such as several bricks. Leave this set until the next day.

Repeat the same process as above for each piece of glass, allowing at least 12 hours for each piece to age before setting another. When the final glass is set, let the aquarium set for a day and then put water in to test for leaks.

If there are no leaks (resetting in this manner is almost a sure proof method against leaks) you are now ready for the final cleaning job.

With a putty knife remove the excess cement, that has pushed out, being careful not to put too much pressure on the glass. Next take a piece of very fine steel wool, moistened with water and give the frame and glass a good rubbing. (Steel wool must be used with caution on stainless steel aquariums). Next rinse with cool water and wipe dry and you will have an aquarium with an almost new appearance, and ready for use.

This seems like a long process, but if time is available, I find this method to be very successful.

P.S. The above recommendations are of general information and they do not refer to any exact size. Therefore, weights and measurements, should be judged by you, to fit the size of aquarium and strength of glass.

FROZEN BRINE SHRIMP

"Squeezins"

An excellent food for fry during their critical first few days of free swimming can be made by squeezing a small lump of frozen brine shrimp through a fine-mesh cloth so that the rich meaty, but very minute particles can drop down into the water. The liquid thus squeezed out also helps create and stimulate infusoria, and the fry gorge themselves on the tiny bits of shrimp that run along with the liquid.

This method of feeding must be handled with some discretion, as an over-feeding will soon cloud and foul up the tank, but used in moderation it is an excellent "in between" food until the fry can take the live newly hatched brine shrimp.

(from "The Aquarium")

SO HELP US

Down in Russellville, Ky., this sign stands outside a service station:

"This is a non-profit organization - We didn't intend for it to be, but that's the way it is."

THE
ARTICLE

YOU WERE

GOING TO WRITE

SHOULD HAVE BEEN ON

THIS PAGE