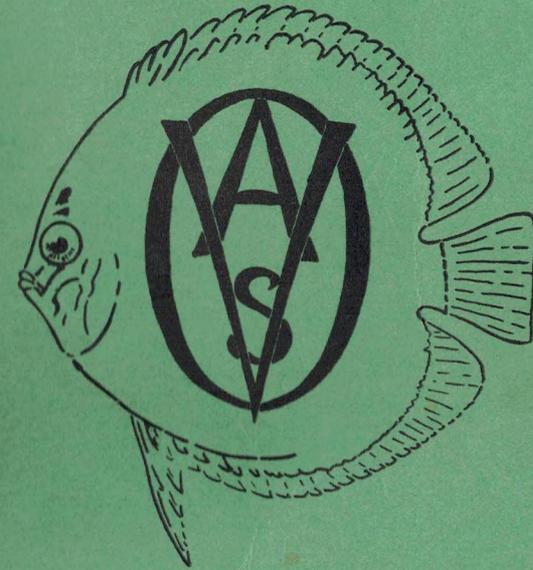


# OVAS NEWS

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OFFICIAL PUBLICATION

OF THE

OTTAWA VALLEY  
AQUARIUM SOCIETY

OTTAWA VALLEY  
AQUARIUM SOCIETY  
P.O. BOX 1135, OTTAWA 4  
ONT., CANADA





It's such a happy season  
That comes around each year,  
With its mistletoe and holly  
And best of all - Good Cheer!

And were glad because it brings again  
The time to wish for you  
A very Merry Christmas  
And a Happy New Year, too!

Executive Officers and  
Directors, Junior and  
Senior Society.

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1960 OFFICERS

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[redacted] [redacted]  
Ottawa 3.

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Ottawa 2.

SECRETARY: Mrs. Thelma Williams Phone:  
[redacted], [redacted]  
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TREASURER: Captain Jack Fraser Phone:  
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Ottawa 1.

SECRETARY: George Ward Phone:  
[redacted], [redacted]  
Ottawa 3.

TREASURER: Frank Jones Phone:  
[redacted], [redacted]  
Ottawa 3.

IMPORTANT NOTICE

Our Committees: Membership, Magazine, Programme, Social, Show and Junior Society require members. If you have one evening each month (yes - only one) to give to your Society then contact your PRESIDENT by phone.

THE OTTAWA VALLEY AQUARIUM SOCIETY

MEETINGS

Junior Society  
Thursday, January 21st ..... 7.00 PM  
Thursday, February 18th ..... 7.00 PM

Senior Society  
Thursday, January 28th ..... 7.45 PM  
Thursday, February 25th ..... 7.45 PM

Regular meetings are held in the Chemistry Building, Room 37, University of Ottawa, 365 Nicholas Street, Ottawa, Canada.

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MAILING ADDRESS

Ottawa Valley Aquarium Society  
Post Office Box 1135,  
OTTAWA 4, Ontario, Canada.

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[redacted], OTTAWA 3. ([redacted]).

CONTENTS MAY BE REPRINTED PROVIDING CREDIT IS GIVEN TO THE O.V.A.S. NEWS AND AUTHOR.

DISEASES OF FISHES

by Herbert R. Axelrod. Honorary  
Member OVAS, Publicity Chairman TIFAS.

Fishes, like all animals, have natural abilities to ward off disease organisms, and it is usually only when these defenses break down that the fishes become infected. Prevention of fish disease is paramount to a healthy aquarium and only proper feeding and maintenance can insure that the fishes themselves will be prepared for any emergency.

Overcrowding, poor diet, insufficient light, improper water and a poorly collected community (that is, keeping predacious fishes with the peaceful, slow-moving species) are the chief causes of diseases among fishes. When an epidemic or wave of illness strikes your aquarium look for both the actual symptoms of the diseases and for the factors which lead to the breakdown of the fishes natural immunity. These adverse conditions must be remedied for a successful campaign against the infection.

The following will help you to find out how to cure the fish and recognize the disease:

Fungus Infection (Saprolegnia)

A cottony growth about a single or multiple site. Area usually will first show signs of being bruised or torn, as fungus cannot attack a healthy fish.

Treatment - Paint infected areas with diluted (1:10 solution of commercial strength) preparation of either Iodine or Mercurochrome. Entire aquaria may be treated with a 1% potassium dichromate solution, or 1 gram of crystalline potassium dichromate to 7½ gallons of water. After fish are cured water should be changed. Treatment should last about a week. (Cont'd page 5)

Eye Fungus

This is a true fungus infection which might easily be fatal. Looks like the eye is getting covered with a whitish scum; cottony appearance is later stage.

Treatment - Paint infected eye with 1% silver nitrate solution obtained from drugstore. Do not use tap water in mixing solution. Then bathe fish's eye in a 1% potassium dichromate solution. The red precipitate which forms on the eye is harmless to the fish. The infected fish should be isolated in an aquarium containing 2 grains of potassium dichromate per gallon of water, until the eye heals, though the disease is not infectious.

Tail-rot and Fin-rot, often called tail-fungus. Mouth Fungus

None of these diseases are true fungus infections. They are caused by slime bacteria and are easily seen by the whitish appearance of the infected area. The sooner the disease is observed the easier it is to cure. Water changes are often responsible for weakening the fish's resistance to bacterial infections of this sort.

Treatment - Aureomycin is ideal for the treatment of these diseases. Single fish may be treated with a 10 mg. tablet of aureomycin (a Long-Life Fish Food product), in a quart of water. Entire aquaria may be treated with a dose of 250 to 500 mg of aureomycin per gallon. Sometimes cures are affected with a 500 mg dosage per 15 gallons of water, but this only removes the symptoms while the cure is in doubt. Bathe the fish in a strong salt solution after the aureomycin treatment. Use 4 tablespoonfuls of salt per gallon.

(Cont'd page 6)

Dropsy (Caused by the bacterium Pseudomonas punctata)

The bloating of the belly as though the fish were egg-bound.

Treatment - There is no known cure for dropsy. The anti-biotics are of no value. Some suggest tapping the liquid from the body of the infected fish, but this is of little value.

Scale Protusion (Either Mibrio piscium or Bacterium lepidorthosae)

Scales of fish start to protrude all over the body. Fish moves slower, frequency of breathing increases, tails become paralyzed and fish stays near top of water.

Treatment - As soon as scales begin to protrude, treatment should begin.

Aureomycin, 250 mg per gallon of water helps at times, but isn't a sure cure.

There is no known absolute remedy. Once this infection has been observed all members of the infected tank should be sterilized by adding 2½ grains of potassium dichromate and two teaspoonfuls of salt to each gallon of water.

Change water completely after two weeks.

Spottiness of the Skin in Labyrinth Fishes. (Pseudomonas fluorescens)

Whitish or bloody patches appear on the skin and fins of the infected fish.

Treatment - There seems to be no known cure for this disease. Pseudomonas seems to thrive in an antibiotic environment. Since labyrinth fishes are mostly involved, a high temperature plus a heavy salt bath might work, though it has shown positive results in only few cases out of many. Try 90°F. for 2 hours in a 5% salt solution.

Tuberculosis

Loss of appetite, sluggishness, progressive  
(Cont'd page 7)

thinness and gradual wasting away. Yellow spots at the base of the caudal peduncle in tetras are also signs of fish TB.

Treatment - Treatment with streptomycin and PAS (para-amino-salicylic acid) are possible cures in the early stages. 10 grains per gallon of water is the recommended dosage. Prolonged overcrowding might be the cause of this disease. No sure cure known.

Pop-eye Exophthalmia

The eye starts to bulge as though it were being forced out by an accumulation of fluid behind it.

Treatment - Antibiotics are of no value. No known cure. May be caused by Pseudomonas punctata.

Constipation

Loss of appetite, slight abdominal swelling, heavy feces.

Treatment - Soak dried food in medicinal paraffin oil, glycerin or castor oil. If fishes refuse this food they must be taken off dried food diet and fed Daphnia, mosquito larvae or cyclops. DO NOT USE WHITE WORMS as they are a chief cause of constipation.

Swim Bladder Disease

Fish have difficulty swimming. They fall head-over-tail or cannot maintain themselves on an even level in the water. Many rest on the bottom.

Treatment - Not a fatal disease, but crippling. Fishes seldom recover. It is caused by physical factors such as poor diet, chilling sudden changes of temperature or pressure.

Loss of Colour

Fish become pale and their colours are not sharp. Normally active live-bearers lose sexual interest.

(Cont'd page 8)

Treatment - This is strictly a food problem. The diet deficiency is due to a monotonous, un-balanced diet. Feeding of tubifex, Daphnia and other live foods usually remedies the situation within 24 hours.

Fish Louse (Argulus foliaceus)

An external parasite about as large as a Daphnia. It attaches itself to the skin of the host by two suckers and lives off the blood sucked from the host.

Treatment - Parasites may be removed with a pair of forceps or tweezers and the spot painted with mercurochrome or peroxide of hydrogen. If parasites are difficult to remove touch them with a piece of salt.

Anchor Worm (Lernaecera species)

Heavy whitish spots of curled-up, imbedded worms (actually this is not a worm but a crustacean).

Treatment - Remove them with a sharp, fine needle. Paint spot with mercurochrome.

Leeches

External parasites visible as they are attached to the host, sucking its blood.

Treatment - Place the infected fish in a 2½% salt solution for ½ hour. Remove remaining parasites with forceps and paint area.

Flukes (Gynrodactylus and Dactylogyrus)

Fish loses colour and grows pale, fins close, skin becomes slimy and small blood-spots appear on the body and base of fins.

Treatment - Treat fish with 5 drops of 5% methylene blue per gallon of water or a 1:100 formalin-water solution. Use aeration when treating with formalin.

(Cont'd page 9)

Black Spot Disease (Diplostomiasis)

Spots are usually black, though in light coloured varieties the spots take on a brownish case, and contain a slowly moving worm rolled up inside the cyst. The cyst is surrounded by heavily pigmented cells, thus the colour symptom. In time the fishes will nearly be covered with these parasites.

Treatment - Life cycle of this parasite is dependent upon a snail, though new fishes may carry it into an otherwise clean tank. Treat infected fish by adding 20 ml of a 1:100 solution of picric acid and water to a gallon of water and bathing fish for an hour, unless they must be removed sooner due to distress.

Ich (Ichthyophthirius multifiliis)

White spots of pinhead size pepper the body and fins of the fish. Fish gets sluggish, close fins, and gradually die as the parasites feed upon their red blood cells.

Treatment - Ich cannot be treated while still in the skin of the fish. It must leave the host for reproductive purposes when the water temperature is raised, then it can easily be treated. Use 50 mg of quinine hydrochloride per gallon or bathe fish infected in a brine bath, 4 tablespoons of salt per gallon of water. Leave fish in either bath for at least 3 hours AFTER each fish is clean of white spots.

Velvet Disease (Oodinium limneticum)

May resemble Ich, but a closer look will show smaller spots, which, when viewed from reflected light, have a velvet-like effect upon the appearance of the fish's skin. Often the skin looks as though it were peppered with fine powder. White Clouds seem especially susceptible to this disease.

Treatment - Add 2 drops of 5% methylene  
(Cont'd page 10)

blue solution per each gallon of aquarium water. Keep tank in complete darkness. Remove and sterilize, or throw out, plants. Acriflavine, same strength, may be substituted for methylene blue. Treatment lasts for 5 days; then three day rest and complete water change then another treatment.

Knot or Pimple Disease (Morbus nodulosus)

Not really a specific infection but rather a series of parastic sporozoa. Looks like Ich but is really little knots, or pimples, "Stubborn Ich" might well be this disease. Treatment - No known cure. Remove infected fishes immediately and treat for Ich, if this treatment fails, infected fish should be destroyed.

Neon Tetra Disease (Plistophora hypheobryconis)

Blemish or spot forms along the 'neon' blue green line on Neon Tetras and related species. As disease progress the area becomes extended.

Treatment - No known cure, though treatment with 500 mg of EACH terramycin and aureomycin per 15 gallon aquarium helps considerably.

Slimy Skin Disease (Cyclochaete domerquei) (Chilodon cyprini) (Costia necatrix)

There is a slimy secretion seen on the fish's skin. The fish loses its colour, grows paler as the slime covers the entire outside of the fish.

Treatment - 30 minute bath in a 2½% salt solution; repeat in 48 hours, and every two days after that until all symptoms are gone. At least three known organisms are responsible for the symptomatic slimy skin disease. If the salt treatment fails 2 grains of quinine (Cont'd page 11)

hydrochloride should be added to a gallon of water and the infected fish should be maintained in this treated water until it is cured. A bath in 2 ml of formalin per gallon of water, for 15 minutes is a last-resort treatment.

A Merry Christmas and a Happy New Year to all my friends in the Society  
Mrs. W. Dickson.



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PANCHAX LINEATUS

by Mrs. Allison Randall, Ottawa Valley Aquarium Society

The aplocheilus lineatus, often referred to as the Panchax lineatus, is found in its natural habitat in Southern India and Ceylon. The name means simple lip (aplocheilus), striped (lineatus), which is more or less an abbreviated description of the fish.

(Cont'd page 12)

The males are sometimes light purple, sometimes a greenish brown, and have golden dots forming horizontal rows along the sides, with a sprinkling of red dots extending into the fins. The male can be distinguished from the female not only in colouring but by the fact that the fins of the male are more pointed than those of the female. The females are a greenish brown but have a number of clearly defined vertical bars on the sides - about nine in number. Both sexes have a red edge to the dorsal and anal fins and a red trimming to the upper and lower part of the tail fin. When fully grown the fish attains a length of three and a half to four inches.

The Panchax can easily be recognized by its flat head and very large mouth (a pike like appearance) and it will swallow anything as small as a male Guppy - our own having proved to be particularly partial to a meal of two month old Mollies. However, it does not annoy fish larger than the Guppy and will live in harmony with them in a community tank. It swims at the water surface, normally descending to the middle of the tank only after falling food.

The Panchax lineatus are carnivores and enjoy catching their own food - mosquito larvae, live daphnia, white worms and tubifex worms. My fish thrive, however, on hard boiled egg yolks, liver, tinned baby foods and cat food and with each of these will demonstrate a tremendous appetite.

The fish must always be kept in a covered aquarium as they are great jumpers - thus speaks the sad voice of experience.

The breeding habits are exactly like those of the top-spawning Aphyosemion family. Just as a matter of interest, the bottom spawners of this family, inhabit waters which often dry up in the hot season causing the death of the fish. Before

(Cont'd page 13)

this happens however the eggs which have been deposited, have been buried in the silt, where they incubate until the rains again flood the ponds and creeks. The dried out vegetation and remains of the parents provide excellent infusoria for the fry.

The Panchax, as mentioned above, belongs to the top-spawners. In order to breed them a two gallon tank should be prepared, well planted to give the female protection from the ardor of the male. The water should be allowed to stand for at least fourteen days, should be slightly acid, not too hard and at a temperature of about 75. Some salt should be added to the water. An alternative to a two gallon tank would be a five gallon one in which one male might be provided with two or three females. A nylon spawning mop is often suggested as this can easily be removed after the spawning has taken place and the eggs may be placed in a refrigerator type dish for hatching. (Either the eggs or the fry should be removed from the breeding tank in order that they receive a fair share of food during their early weeks). After ten to fifteen days the fry should emerge hungry for hatched brine shrimp. More success is likely if the parent fish are young - there will not be as many eggs but more are likely to be fertile.

In closing this note I would like to say that I should be pleased to hear from anyone who might want a female Panchax, aged six months, healthy, for breeding purposes. I have very limited space and I wish to put some small Swordtails in the tank in which I have to keep the Panchax but as you will appreciate this is not possible if I wish any to survive.



Dear Santa,  
Please send me some articles for the  
OVAS News. Editor.



HAVE YOU HEARD THE LATEST????

...Did you ever see a five pound box of candy disappear in 10 seconds? The Junior Society Christmas fun night was a great success and I hear our Supervisors nearly got trampled to death when the refreshments (soft drinks, cake and candy) were served...

...The Senior Society welcome three new members: Mr. W. Belair, Mr. J.W. Smith and M.R. Crowe, bringing the membership total to 109...The Junior Society really broke all records with a membership of 70..

...During the Christmas Holidays (when you get into the mood) try a little sing song...Any two or more of the songs in the following groups may be sung together with good results. Group 1 - Oh Susannah, Turkey in the Straw and Casey Jones. Group 2 - Annie Laurie, Put on Your Old Grey Bonnet and Swanee River. Group 3 - London Bridge Is Falling Down, How Dry I am and The Old Gray Mare. Group 4 - The Sidewalks of New York, A Bicycle Built for Two and In the Good Old Summertime...

...Our thanks to Innes Publication "THE AQUARIUM", November 1959 issue, for the remarks about our OVAS News...The Aquarium states:

"Our Canadian neighbours are avid aquarists also, and OVAS News published by The Ottawa Valley Aquarium Society makes this fact very clear. (Cont'd page 15)

This Society is made up of a Junior and Senior Group.

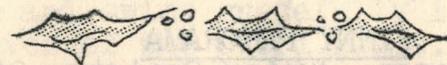
One of their interesting projects is a circulating library of books devoted to the aquarists hobby. Members are allowed to keep books for one month.

OVAS News, along with news of the Society, carries many interesting short articles on the breeding of fishes, treatments for various diseases of fishes and other phases of aquarium management".

...Are you one of the lucky members who won a pair of those beautiful guppies? Our thanks go to Mrs. Marie McCann of Dallas, Texas, U.S.A., who kindly donated the guppies to our Society...thanks a million Marie...

...When Mr. John Haas, Chairman of TIFAS, said to put a turtle in your aquarium to get rid of snails he wasn't kidding...Don Thompson tried it and had great success. It seems that the turtle really does a good job and in a very short time...

...A VERY MERRY CHRISTMAS AND A HAPPY NEW YEAR...enjoy yourselves...these are the good OLD DAYS you are going to miss in 1979...



SUGGESTED AMENDMENT TO THE OVAS CONSTITUTION AND BY-LAWS

Reprinted from the President's News Letter November 19th, 1959.

At our last Executive Meeting, it was felt that the Society would always be left in a very difficult position, if at another time we should again lose our Vice-President. Not only was it a blow to the Executive to lose

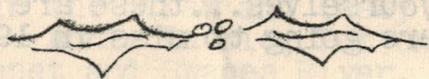
(Cont'd page 16)

Roger at such a crucial time of the year, but he had gained all the experience necessary to make a very good President. It was decided to try to safeguard the Society by having two Vice-Presidents. In order to do this the Constitution must be amended as follows:

Article 4, headed "Officers", Section 1 shall read:

"The Executive officers of the Senior Society shall consist of a President, a First and Second Vice-President, a Secretary and Treasurer. The executive officers shall be elected by ballot and hold office for one year."

Notice of amendment to the Constitution is made to the Society in writing, as well as being announced at two regular meetings. Then at the third meeting the amendment is brought up for discussion, and a vote is taken. We will have our second reading at the December meeting; if the amendment is agreed to a Second Vice-President could be elected at the January or February meeting to help the Executive carry an ever-increasing number of duties and responsibilities.



#### FINNY PANORAMA

By Ronald Ensom, Junior Society, Ottawa Valley Aquarium Society.

(NOTE: This excellent article was written by Ronald Ensom of the Junior Society as a part of his school work, for which he received very high marks).

Sitting here quietly gazing at a picturesque aquarium I slowly feel myself being overcome by its enchantment.

In the crystal-clear water one may easily drown troubling thoughts. For the

(Cont'd page 17)

colourful habitants of this quiet community soon chase away even the deepest-rooted blues.

The whites, the browns and the blacks of the gently slanting gravel have a lure of their own. Leafy green plants of all shades, shapes and sizes, grow in curious patterns in the rolling bottom. In the centre front, a large broad-leafed Amazon Sword Plant haughtily raises its light green leaves three quarters way to the surface. Along the back, a thick row of dark green Hornwort touches the surface of the rippling water with outstretched arms. In the two far corners in a very light shadow, lacey Cabombas spread their bushy fronds out into the soft light. Along the sides and for several inches inward, several types of fascinating Sagittaria slope gently toward you, with each plant growing shorter as it nears the front. Two milky white rocks about three inches high form an arrow head pointing towards the back of the tank from around the Sword Plant. A piece of coffee-coloured driftwood shaped like a boomerang with one end buried in the gravel goes up and over the left rock toward the centre of the aquarium.

Lastly and most important come the intriguing little denizens who live in the quiet depths. A velvety Black Mollie with churning tail appears from behind a clump of Sagittaria and swims gracefully into the waving leaves of the Sword Plant. A group of eye-catching Veiltail Guppies with large deep blue tails dart across their movie screen, each one a star. A deep, red-orange Sword-tail with a jet-black sword extending from his tail peers out from under the ledge of a rock. A blue Betta with large colourful trailing fins rushes out from a - now wait! Suppose YOU take a trip into a tropical fish shop and experience for yourself the lure of this watery world, this Finny Panorama.



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ITEMS OF INTEREST  
 From Exchange Magazines

From Angel Notes - Alamo Aquarium Society.  
 ...How's This For A Fish Story? by Helene Durfee, Boston Aquarium Society News...  
 ...When an angel fish was worn out trying to find a leaf that was firm enough to hold a deposit of eggs, I sympathetically put my hand under the leaf she was struggling with. With hardly a pause, she went back to the leaf, cleaned it again, including my hand up to the wrist. Then she proceeded to lay a row of eggs the length of the leaf and the back of my hand - up to the wrist! It was two o'clock in the morning and I thought nobody could be more ridiculous than this; so I excused myself and went to bed...

...The Hobbyist - The Tropical Fish Hobbyists of Dallas say...Don't forget the cup of regular household ammonia to one gallon of water to soak your nets in. Be sure to always rinse well. If you get the habit of taking care of your nets, you will find that you will not spread enemies and other unwanted things like

(Cont'd page 19)

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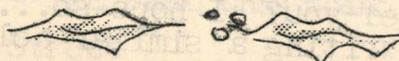
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A VERY MERRY XMAS TO OVAS MEMBERS

Ick, Fungus, and other diseases. Remember to renew your mixture about every two or three weeks...

From Angel Notes - Alamo Aquarium Society.  
 There is so much good in the worst of us,  
 And so much bad in the best of us,  
 That it little behoves any of us,  
 To talk about the rest of us.

...The Tropical Fish Hobbyist, November issue, has a very interesting article regarding "Fishes on Postage Stamps" by Jurgen Grobe...



REMEMBER OUR ADVERTISERS

DID YOU KNOW???

by Mrs. Lorna Olley, Ottawa Valley  
Aquarium Society

Cabomba, Cryptocoryne, Myriophyllum, and  
Ludwigia prefer soft water.

Vallisneria, Sagittaria, Water Sprite,  
and the Amazon Sword Plant prefer hard  
water.

Platies and Swordtails are touchy about  
temperature changes.

Never move a Sword Plant once it is well  
rooted.

The Firemouth Cichlid (in most cases), is  
not as fierce as some cichlid types and  
can be kept in a community tank with  
medium size fishes. One only to a tank.

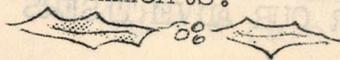
The new Black Lace Angels are scrappier  
but hardier.

Most species of barbs should not be kept  
with long finned fish as they like to nip  
the fins.

It's safer to buy young fish and plants as  
one never knows for certain the age when  
purchasing. It is of course a temptation  
to buy mature good looking specimens, how-  
ever they may be on their last few months  
or days of life.

The life expectancy of live-bearers is 2  
to 3 years only. Some egg-laying types  
live 5 to 8 years, as does the extremely  
beautiful Harlequin fish (Rasbora  
Heteromorpha).

Is there something here you didn't know and  
may have helped you? I hope so... How about  
someone else writing a similar column with  
their views and comments.



RED WORM CULTURE

By Mrs. Flo Trottier, Ottawa Valley  
Aquarium Society.

Have you ever thought of raising red worms  
for your fish during the winter months? It  
is good food for our tropical fish, cost so  
little, and when the spring comes along you  
are ready for your first fishing trip - that  
is if you like fishing.

The materials required for raising red  
worms are:

1. One butter box (approximately 1 foot  
square).
2. Garden soil - its not too late to put a  
patch of grass and does help the culture.
3. Fill the box to  $\frac{3}{4}$  full. Place in your  
basement in a cool spot and keep the soil  
moist by adding a little water about once  
a week - remember the soil should be moist  
as red worms don't like to swim.
4. Red worms just love good coffee grounds.



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and a

HAPPY NEW YEAR

Mr. Ken Craig.

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O V A S

JUNIOR SOCIETY SECTION

Editor:  
Larry  
Neumann



PRESIDENT'S LETTER

Once again the time has rolled around for the last meeting of the year. One year ago I was elected to the office of President which was a great privilege and honour for me. I only hope that I have served you to the best of my capabilities.

Throughout the year I slowly but surely became familiar with the working of the OVAS and the people who make it run. To all of these people, the members of the Senior Society, the Junior Advisory Committee and you, the members, I express my thanks for your cooperation. I would also like to thank my Executive and Directors for the wonderful job that they have done, and on behalf of the Executive and Directors I would like to express our congratulations and best wishes to the new slate of officers.

Upon looking back over the year, I can see how our membership has more than doubled to the present high of 70. I have seen the OVAS present to the public our show at the "Ex", but most of all, I have become acquainted with many people whom I will never forget in the OVAS.

In conclusion, I would like to remind  
(Cont'd page 23)

you that it is not an easy job to run the Society without your help and cooperation, and so, now that you have elected your new slate of officers, don't think that you should stop there. No! this is only the start. Back them up and show them how much you can really do for your club!

I will not say good-bye, for I don't intend to leave the OVAS - instead I will just say "Thank you, so very much" and let me be the first to wish you all a MERRY CHRISTMAS AND A HAPPY NEW YEAR.

*Ian Woods*  
Ian Woods, President.



COMMITTEE REPORTS

Membership - Burton Grundy, Director

At our November meeting we were glad to welcome another six members increasing our record membership to 70. We welcome Laurie Walker, John Manchester, Shawn Mackenzie, George Pettit, John Burns and Bruce Cheesman. Our Parents Night was very successful with an attendance of 58 members and 37 parents, Total 95.

Magazine & Library - Larry Neumann, Director

I am very pleased that a number of members are writing articles for our section of the OVAS News. In this issue we have a very good article, written by Ronald Ensom, which is listed in the Senior Society Section.

I am sure there are a great many more members who observe some very interesting things in the aquarium and about the fish that have spawned. You do not have to be an experienced writer to do this. Just sit down and write what you find interesting, the experiences you have had with the hobby.

(Cont'd page 24)

Everyone is taking a great interest in our Library. As a result of fines (for books not turned in on time) we have purchased another good tropical fish book. Remember to return your library books so that other members will get the opportunity to read them.

Programme - Chipper Vickers, Director

Our November meeting "Parents Night" was a great success with a record attendance. We had some excellent speakers, Mr. Phil Curry on White Worms, Mr. Don Thompson on the Community Aquarium and a Quiz on the Swordtail fish. Special door prizes were obtained for the Parents.

Our December meeting featured an excellent talk by Ian Woods on the African Mouthbreeder, reports by the Directors and ended with a comedy film, bingo, quiz, and a drawing contest. A great many prizes were given away to the winners for which we thank Mr. Don Thompson, Mr. Gerry Lalonde and Mr. Harvey Wittenberg for their kind donations.

Show Committee - Gordon Worden, Director

At our November meeting we had 8 entries in the Jar Show. Larry Neumann was the winner with the best swordtail fish. George Ward won the Jar Show prize for the best African Mouthbreeder at the December meeting.

Social Committee - Andrew Holdham, Director

I would like to express my thanks and appreciation on behalf of the members and Executive to the Senior Society Social Committee for serving the refreshments at our November meeting "Parents Night".



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Happy New Year

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SPAWNING PLANTS

by Mo Lapin, SOA Journal, Southern Ohio  
Aquarists.

This column shall concern itself not with the reproduction of plants (as you may have supposed after reading the heading) but with the reproduction of fishes. Plants are very important in breeding, and I have found them to be the difference between successful and unsuccessful attempts. Although each species and each individual pair of fish differs in the conditions it desires for breeding, we shall take our popular fish in large groups and make suggestions concerning their probable needs.

1. Livebearers. Although small females of various species can be placed in breeding traps, I have found it better to keep all

(Cont'd page 26)

fish in comfortable quarters. Well fed females will not eat the young if plenty of plants are available for the youngsters to hide in. Since the baby first falls to the bottom, and then stays close to plants near the top of the tank, it is best to cover the lower area with dense planting of Dwarf Sagittaria, Hair Grass or Nitella, while the top is well covered by Water Fern, Riccia or even Anacharis, Foxtail or Cabomba.

2. Bubble nest builders vary greatly in their plant needs. Bettas and Paradise Fish can breed with or without surface leaves. Blue Gouramis generally prefer large water Ferns, while the Dwarf Gouramis needs algae, Duckweed, Riccia or any loose bits of vegetation to incorporate into his nest. For all these fish it is also necessary to provide shelter for the female before and after spawning. A thicket of any rooted plant should serve this purpose.

3. Barbs and other adhesive egg layers will require thickly planted clumps of Myriophyllum, Lugwisia, Cabomba, Anacharis or any bushy leaved plants to which the eggs will adhere. I find it is also necessary to cover the sand floor with Hair Grass or other fine plants so that the parents will not swim back and eat each egg as it falls.

4. Layers of non-adhesive eggs such as Zebra Danios will need the bottom protected with bushy leaved plants, unless marbles or special equipment is used. Even with marbles, it is advisable to give the fish a few clumps of plants through which to swim.

5. The Characins (Hemigrammus, etc.) prefer a bushy thicket for spawning.

6. The Lyretails and other Killi-fishes  
(Cont'd page 27)

deposit their eggs near the surface among the leaves or roots of floating plants or nylon mops.

7. Except for Angel Fish, who will spawn on large leaves, most Cichlids will uproot and destroy plants at mating time. Many species will appreciate flower pots, slate, rocks or other pieces of junk, both for spawning and for hiding places.

In all cases, a superfluous plant is never harmful, while many a fish has been killed because of the lack of a private resting place.



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JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY

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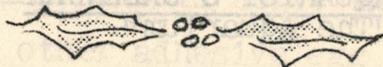
THE AQUARIST'S CALENDAR  
"The Aquarium"

DECEMBER - We have now reached the beginning of a long season in which we cannot freely do some of the things that were proper to do in summer. One of them has to do with adding fresh water to the aquarium. In the warmer months in some localities it is safe to replace up to 25% of aquarium water with water direct from the tap. This would now be dangerous. It should be seasoned at least 24 hours before use. Preferably it should be drawn hot. The heat speeds the elimination of noxious gases, especially of chlorine. Naturally the seasoning should take place in a vessel which could have no bad effect on water. Two of the most common dangerous containers are galvanized iron and new wooden buckets or tubs. The drawn water seasons more readily if air can be pumped into it.  
(Cont'd page 28)

Some aquarists imagine that the elimination of surplus air from new water is the reason for seasoning it. This is not true. An unknown ripening action continues which makes the water better for fishes. Water which is fresh or only partially seasoned develops a decidedly unpleasant smell after a few days' use by fishes. A week's seasoning in winter is none too long. One of our most successful aquarist maintains a succession of glass gallon jugs, so that no water is used before it has stood a month.

Keep a close watch on your plants these days. If they are not thriving, either remove them or see that the aquarium gets more light. It should be remembered that dying leaves not only are no benefit, but are an actual detriment.

AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER



SPAWNING THE AENEUS CAT FISH

by Wynn Hansen - Aquarium News - Aquarium Society of Eastern Connecticut, USA.

The Corydoras Aeneus, often, and rightly so, called the most ambitious catfish in the aquarium, is rather drab and comical as he earnestly goes about his work of keeping the aquarium clean and shipshape.

This little fellow can be spawned and quite easily if handled properly. There are several methods of spawning, although little written on this particular part of this little fish's life.

Frankly, he has been a necessity and will continue to be so for quite some time to come. This makes him much in demand and consequently his methods of propogation

(Cont'd page 29)

must be protected. A few of his idiosyncrocies, not easily recognized, make it quite easy to protect his secrets.

I have been spawning this fish for quite some time. The following is the method I am using. I ask you to remember, this particular method is only one of perhaps hundreds. This one works for me. If you observe the salient points and adapt general habits of this fish to your area, you also can raise the aeneus if you are interested.

A clean aquarium is vitally necessary. Also, in the southern California area, water properly aged, 24 hours aging if the water seems to be enough.

The aquarium should be 24 inches long by 12 inches high by 12 inches wide - or larger the larger the better. Fill almost to top of aquarium. Heavy aeration helps. Also, I have had lower mortality in the fry by filtering the water from the time it is placed in the aquarium until the baby fish are raised and removed from the aquarium.

The "ph" of water seems to be of little consequence, as I have been successful with spawns in both acid and alkaline water. Do not add salt to the water. Best spawns can be had with temperature at 72°F.

An abundance of live food is not particularly necessary, but preferable. The food can consist of your own mixture, if you prefer, but more success will come your way if adult size brine shrimp, daphnia, or white worms are used. If possible, a combination of all of the live foods brings excellent results.

Again, I will suggest that you filter the water to keep it clean, and clear. After the eggs hatch, some method should be used to keep the fry out of the filter - they insist on going through the filter tube and to their death if preventive measures are not used.

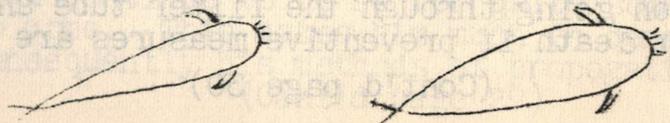
(Cont'd page 30)

The parent fish should be separated from the opposite sex for at least two weeks. During the separation period, they should be fed as much as they can eat of the best food available. They are ready to spawn when they turn pink on the lower part of the sides and under the belly.

In my experience, one female and two males should be placed in the aquarium at night. Avoid disturbing the fish as much as possible, even to isolating the spawning tank, if conditions permit. I find it best not to go near the tank until late in the afternoon; the reason being that they usually start spawning in the morning and continue the entire day. It is not unusual to end up with six or seven hundred babies ready for market. If they fail to spawn promptly, don't discourage, as they must become accustomed to their new surroundings, consequently they seldom spawn before the third day. Eggs are placed on the glass sides of the aquarium.

After spawning is finished, remove the breeders and add one drop of 5% solution of Methylene Blue to each two gallons of water. Do not continue to filter until after the eggs have hatched. The eggs begin hatching after 72 hours to 96 hours. DO NOT feed the babies the first two days after they hatch. On the third day, newly hatched brine shrimp should be fed twice each day until they are able to take larger foods.

There are several ideas as to how to sex these fish, but the easiest way I have found is to look down on them from the top of the tank. Observing them in this manner, the female will look like your thumb (see below), the male more like your little finger, and the male is usually slightly smaller.



### THE MYSTERY SNAIL

by George J. Maier - Reprinted from "Tropicals in Chicago"

Because an aquarium is an entity, or in other words, a world all its own, many various phases of activity come into play. One of the interesting phases of activity is disposal service.

There are fish well suited for this disposal task, such as the various members of the Corydoras family or the Octocinclus and Loricaria and Plecostomus group which act as algae eaters as well as "floor" cleaners. Then the various kinds of snails can be put to use as general scavengers.

The Ramshorn snail, either black or red, is most widely distributed and they seem to show up just about when least expected. Mostly their eggs are deposited on plants and since they are very difficult to detect, they are generally overlooked when a new tank is planted...and presto, a week or two later we find snails present. Since they are bisexual--that is each is a male and a female at the same time and after fertilization both can lay eggs--it is difficult to curb their propagation.

About 25 years ago the Mystery Snail (*Ampullaria cuprina*) made its appearance as an aquarium inhabitant. Where the name "Mystery" comes from is still a mystery to me. A relative of it, the infusoria snail (*Ampullaria gigas*) was known long before and was used by aquarists as an infusoria producer. But their insatiable appetite rules them out as an inmate in a planted aquarium because all plants are eaten in short order. They were generally kept in separate containers and fed large quantities of lettuce. If ample food was provided, their droppings consisted of only partly digested food and acted as a food source for bacteria which in turn

was eaten by protozoa, generally known as infusoria. In most cases it was a stinky mess at best and has fallen into disuse today because there are better infusoria production methods.

When the Mystery Snail was introduced it soon was accepted by fish fans as an interesting and useful aquarium inhabitant. And because their breeding can easily be controlled they won't overrun the aquarium as do the ramshorn or pond snails.

Also, with the Mystery Snail, most aquarium plants are safe. The plant *Nitella* is one exception. Next on the list, in case of extreme hunger, is water sprite. But the Mystery Snails are good algae eaters and in a tank whose sides are covered with algae you can readily see the path they eat through it. Unfortunately they do not touch blue-green algae and the dreaded hair algae.

Algae is actually scraped off the glass and plants with their tongue, called radula. Each kind of snail has its own form and shape of radula and they are scientifically classified. Observed with a good magnifying glass you can see how the two covers on each side of the mouth open up and the radula comes out and with a forward motion scrapes the algae away - similar to how a cat would lick up something from a flat surface.

Very interesting to observe is their way of breathing. They have gills to take on oxygen and also an air intake system similar to our labyrinth fish. From time to time they come to or near the surface of the water and through their air tube old air is expelled and new supply taken on. The pumping of the head to accomplish this can plainly be seen. At times they extend their air tube--which is located to the left of the

(Cont'd page 33)

head when seen from top--as much as two inches 'til it reaches the surface, similar to a schnorkel device on a submarine. As soon as the air filling process is completed, the air tube is contracted and on their way they go.

Their air supply can also act as a ballast. If snails are in a hurry (if such can be said of snails) to go to a deeper region they expel several bubbles of air and down they go like a paratrooper.

The head sports 4 horns which house the sensory nerves. At the base of the larger horns the eyes are located on short stilts. If kept with aggressive fish the horns are seldom extended to their full length because the fish pick on them. Guppies are great annoyers of snails. But at night when fish are inactive the snails go about their business unmolested. All ampullarias have a tight fitting cover which closes over them when they are contracted. Therefore they can be kept safely out of water for several hours. When active the cover, which is hinged, is pushed back against the shell.

They are of South American origin, and are accustomed to warm water, so they should never be exposed to temperatures lower than 68°F.

As for food, anything will do that is edible, such as algae, lettuce or spinach, meat, worms or prepared fish food. Should a fish die, they will eat him and only the skeleton will be left. After a few days the bone structure of the dead fish will soften and they eat that too. Live fish are never attacked for the simple reason that a snail cannot catch a fish. But eggs of fish are on the snail's delicacy list.

Interesting to watch is their way of propagation. Mystery Snails are not bisexual--you have males and females. After copulation the female will get out of water

(Cont'd page 34)

to deposit her eggs above the surface of the water. In an uncovered tank snails often fall to the floor in the process and very often are fatally damaged. This is done generally at night or in the early morning hours. The female stretches out to her full length and one egg at a time glides along the body toward the head. The mechanic of the gliding action of the eggs is still not explainable and considered one of the mysteries of nature. One egg after another, at about a 30-second interval, is deposited in a grape-like cluster. The eggs are pink in colour and soft to the touch but harden after a few hours. And if the air around them is reasonable moist they will hatch in anywhere from 16 to 30 days, according to temperature. When ready, the whole batch turns mushy and breaks up and the young snails fall into the water below. Because they are already protected with a shell, they are reasonable safe.

The young snail is about one-eighth inch in diameter or even a little smaller. As the moluck grows the shell has to be built and for that purpose they extract calcium from the water. It follows, that for their well being, they require reasonably hard and alkaline water. If exposed to acid and soft water the shell gets pitted. This corrosion generally starts at the center of the spiral and thus inflicted damage can never be repaired. Their life expectancy is from 2 to 3 years and their total diameter when full grown can exceed 2½ inches.

All in all, here is an addition to almost any aquarium...and if the owner of the tank is reasonably well acquainted with the life of the Mystery Snail in general, he will find them most interesting and amusing. At the same time they do their share as a clean-up crew and in that manner pay for their keep.

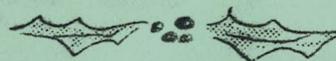


FOLLOWING ARE SOME NAMES OF FISH. THEY ARE ALL POPULAR. TRY TO UNSCRAMBLE THEM  
From Water Lines - St. Louis Junior Society

1. ONNE RATET Neon Tetra
2. UBEL ROMIUGA Blue Gourami
3. JWHEEL SIFH Jewel Fish
4. DRE OONM Red Moon
5. STLAWOIRD Swordtail
6. FCHSITA Catfish
7. GLAEN SIFH Angle Fish
8. BEZAR NOIAD Zebra Danio
9. PYUPG Guppy
10. SKINSGI ROMIUGA Kissing Gourami

ANSWERS (Don't cheat)

1. Neon tetra, 2. blue gourami, 3. jewel fish, 4. red moon, 5. swordtail, 6. catfish, 7. angel fish, 8. zebra danio, 9. guppy, 10. kissing gourami.



Dallas Aquarium Society "The Hobbyist" states...Never plant Cabomba and Anacharis in the same tank. For some unknown reason the Anacharis causes the Cabomba to shed its foliage. Also, Corkscrew Vallisneria should not be planted with other varieties of Vallisneria, or you will lose the Corkscrew variety.



A VERY MERRY CHRISTMAS AND A HAPPY NEW YEAR  
Editor.

NEW YEAR

*Greetings*

