

THE RAINBOW TIMES

Volume 10/Number 2



Rainbowfish community in a thriving, planted aquarium
Photo by Gary Lange

The Rainbowfish Study Group, Inc.

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Reprinting is available for not-for-profit organizations only. When reprinting articles please mail 2 copies to the Editor. Please include the address of the Editor in any reprints. This will insure that further reprinting will also be forwarded to us. Thanks.

FROM THE EDITOR . . .

Kevin Hosmer

January 1997

This issue will introduce several columns and organizational items that should become regular features of the *Rainbow Times*.

- I would like to introduce new member Mike Adams who volunteered for duty. Mike, a soon to graduate environmental engineer, will be reviewing the information on the internet and giving some guidance to those of us less comfortable with the terrain.
- With the cooperation of the RSG membership, Cary Hostrawser will be reporting on the progress of the species maintenance program. Cary has obviously put much thought and effort into the program. I hope that many members will participate in the propagation and distribution of our rainbowfish.
- An article index will be placed on the last page of each issue. This should facilitate finding past articles without searching for the index.
- New members will be listed as they join us.

I am still resistant to grouping all Fish & Egg listings together at the end of each issue. Articles or columns are seldom a tidy number of full pages. It is usually convenient to fill each final partial page with an F&E listing.

An E-mail directory is published within this issue. New subscribers can contact me for inclusion at the address listed on the inside cover.

(continued next page)

Please note your expiration code on your address label!

Expiration Code 1001 is **overdue** and will be removed from our mailing list.

Expiration Code 1002 is due **now**.

Please mail your membership dues immediately to ensure uninterrupted receipt of the *Rainbow Times*.

I would like to propose that the *Rainbow Times* offer another regular feature to its readers - a retail tropical fish store review. Many members travel during holidays or for their jobs and find themselves in unfamiliar cities for extended periods of time. If an exceptional store exists in your location, a brief paragraph could be submitted that would assist visiting members in identifying worthwhile stores. The criteria for judgement should relate to typical stock of rainbowfish and gudgeons species, knowledgeable sales staff, aquatic plants and aquarium maintenance. I suggest that the member submitting the review offer their name and telephone number for the purpose of answering any questions that prospective visitors may have. Only positive reviews will be published!

I would like to encourage any author to supplement their article with photographs. Cropping and enlargement, although not necessary, is beneficial to emphasize the subject of the photograph. The negatives should be available in this situation.

In the last issue I requested comments regarding the hybridization and/or genetic altering of rainbowfish. It is either an intimidating subject that nobody dared tackle or simply - nobody cared. It scored a zero on the response meter.

I have managed to misplace any information I may have had regarding the Regina Aquarium Society. I would appreciate someone informing me of where to send our newsletter to fulfill our obligation for reprinting their article, *Glossolepis Incisus* “Salmon-Red Rainbow Fish” by Jacklyn McNaughton, in the last issue of the *Rainbow Times*.

FISH AND EGG LISTINGS

Send fish and egg listings to: Kevin Hosmer
RR3 Box 4353
Milton, VT 05468

Space permitting, your listing will run for two issues unless you specify otherwise. The standard for listing a mop is at least 24 eggs in the mop. Most rainbowfish usually produce more than that. If not, price should be specified per dozen eggs.

CHAIRMAN'S REPORT . . .

Gary Lange

Let me share with you a letter that was recently delivered to me. I think it has meaning for all of the RSG members.

“Dear Gary,

A year has passed since I became a member of the RSG and I haven't done squat, nada, zilch, etc. . . . I've raised a few fish, enjoyed watching their behavior and learned a few lessons about caring for rainbows. However, am I a member of the RSG? No, I'm a \$10/year magazine reader. Being a member means contributing to, working with and volunteering for an organization, exchanging information and sharing knowledge. It's taken a year to kick myself in the rear and come out of obscurity but now that I have it is my intention to truly become a member of the RSG.

Sincerely,”

I'm withholding this individual's name not just because I don't want to subject him/her to teasing but because I think that it could have been written by many of our members, including yours truly. Please take the time today and think about how you could interact in a positive manner with the RSG. We need artwork, which is something that I'll never be able to do. We are always looking for articles, one of the main reasons this newsletter always seems late. It doesn't always have to be on collecting the latest & greatest fish either. We can certainly use some articles on reinforcing how we raise and hatch rainbowfish in the most optimal manner. Even side issues such as how to effectively produce a planted tank is important to us, as rainbowfish really enjoy plants and only show their true potential in a planted tank. I'm looking for an individual with some computer skills and a good color printer to help us make some buttons for our upcoming rainbowfish convention. If you now have a surplus of rainbows don't waste them all on the local petshop but list them in our F&E report so that others may enjoy the same quality of fish. Do you have an idea for a way that we can produce a better magazine or something that we can sell to ensure that future conventions will take place? In short - how can you help us to make this a better newsletter? Please E-mail, write or call with your suggestions and offers.

I will be speaking at the Loraine County Aquarium Society (Cleveland), Friday March 21st. For more information call Donna Massey at (216)365-0941. For the really adventurous we'll be doing a “How to take Fish-Pix” workshop on the 22nd. I'm sure space will be limited for that so call the above number to sign up.

Rainbowfish Convention September 19th-21st, 1997 in San Francisco - The SFAS group hasn't completed their search for a hotel but I'm promised it will be completed in the next few weeks. We are trying to find a place that won't totally break the bank and still leave you with money to spend on the auction. Speakers listed so far are Dr. Allen, Neil Armstrong and Gilbert Maebe. This promises to be the best lineup of rainbowfish speakers that has ever occurred in the US. If you live out in the Bay area and would like to help with the planning please get hold of Kim Goodwin at (510)839-5681 or E-mail at fishgirl@ix.netcom.com. Once the hotel dates are set we will have them posted on our web site at <http://home.earthlink.net/~sbuckel/index.html>.

Peter Unmack will be speaking on Desert Fishes of Australia at the NEC workshop April 11th -13th in Farmington, Connecticut. If you're within driving distance this is always one of the best conventions in the country. This year's convention features cichlid speakers with names like Konings, Leibel, & Lundblad. Non-cichlid talks will be presented concurrently including those of Ginny Eckstein and Charley Grimes (personal favorites), and Claus Christensen of Tropica. This is the company that is selling those hot new java ferns, Tropica and Windeløv. This is Claus' first speaking engagement in this country. The Aquatic Gardeners (AGA) promise to be out in force hosting two events of Friday, before the "official" opening of the convention. A planted tank round table and an AGA open business meeting will both be held. Tentative times are 1:00 p.m. for the round table and 3:00 p.m. for the business meeting. For further information on AGA activities that will occur during the convention contact Karen Randall at (508)429-1729 or krandall@world.std.com. Also of interest, many specialty organizations will be hosting booths at the get together Friday night. All these organizations will be giving short presentations about the goals and benefits of their organizations. For registration forms and more information on the NEC contact Janine/David Banks at (802)482-3616 or dbanks@together.net.

ANGFA journals - Through the RSG. Price for 1 year, 3 Fishes of Sahul & at least 4 bulletins/year are US\$26. Please send dues, payable to the RSG directly to me so that I can forward the information on as soon as possible. If you have any questions please feel free to call.

And lastly, please note my new E-mail address gwlange@stlnet.com. Please, let's all "come out of obscurity" and help to make the RSG a great club and 1997 an especially great year. I'm looking forward to working with you.

We've entered the computer age, like it or not. And while the computer is the bane of existence for some, it can provide access to knowledge that was once out of our reach making it a useful tool for fish hobbyists. The main vehicle for the exchange of information is the internet. I remember my first exposure to talking fish on the net was the collection of newsgroups. What was at first a forum for fish enthusiasts to discuss their aquatic passions became populated by beginners asking why the neons they put in their new aquariums all died in two days. While it's an excellent place for newcomers to the hobby to gather information, those who desire a more advanced forum may want to look elsewhere. Luckily, many avid hobbyists directed their energy to the net giving us new access to information on about any kind of fish we can think of. For those of us interested in rainbows, there are several web sights of interest, which will be covered in subsequent articles, but the purpose of this article is to discuss the RSG homepage as well as the ANGFA-North America homepage.

The RSG homepage is maintained by Scott Buckel and Roger Crowther. The URL for this site is <http://home.earthlink.net/~sbuckel/> and on it you can find lots of information on raising fry, sanctioning a show, or even photos of bows. This was the first sight I found on the net with information regarding rainbows. I find myself checking it often for new information on bows.

Roy Hunter has put a lot of work into the ANGFA - North America. At this web sight, you can find photos of rainbows, articles, egg listings, and much more. The URL for this site is <http://home.sprynet.com/sprynet/rainbows01>.

Last issue included an invitation to join the Rainbowfish Mailing List, which is a forum for the exchange of information about rainbowfish and other fishes from Australia and New Guinea. For those interested in becoming a part of the RML, it's easy. All you have to do is send an E-mail message to majordomo@auug.org.au with "subscribe rainbowfish" as the body of text. If you want more information on the RML, you can find it on Andrew Boyd's home page at <http://www.pcug.org.au/~andrew/rml.htm>.

Web sights are constantly being updated, so be sure to check back frequently. We'll see you next month on the net with more web sights of interest to members of the RSG.

January 1997 RSG E-mail Directory

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Boulet	Stephen	STEPHENBOU@AOL.COM
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Jim Forshey
 The Aquatic Book Shop
 3050 Countryside Drive
 Placerville, CA 95667

(916) 622-7547

We are going to try and start a weekly E-mailing of the new aquarium books we received the week before. If you or if you know of anyone that would like to be added to the list please E-mail and let us know.

E-mail Address: jim@seahorses.com
 Home Page: [HTTP://www.seahorses.com](http://www.seahorses.com)

11/18/96

Roy Hunter
 P.O. Box 380
 New Castle, CO 81647

RAINBOWS01@SPRYNET.COM
 (970) 876-2553

Roy maintains a large variety of rainbowfish species. Contact via E-mail or telephone to discuss availability and shipping.

2/1/97

Trader's Luck

by David Brown

Have you ever made a decision and begin to regret it almost immediately? Little more than a year ago I felt just this way driving home from the local pet shop.

Half an hour earlier I had walked in the shop carrying two five gallon buckets and in each one swam a ten inch red Oscar. When I left I carried seven little fish, each one barely an inch in length.

The fish were housed in a tank simply labeled "Assorted Rainbows \$10 each." The shop owner, a fellow I had traded with several times before, assured me the price was not excessive. In his words, "Why these fish are the hottest thing going today."

Reaching home I began to acclimate the seven into a newly set-up 55 gallon tank. With moderate hardness, a pH of 7.1 and two inches of washed river gravel it was otherwise bare.

After their release into the tank, the fish hovered nervously in one corner. Whenever I approached the aquarium they dashed frantically about. So cutting the lights, I decided it was time to do some research on the seven little fish I had so hastily traded for.

After an hour of searching through four years of back issues from three major fish publications I was beginning to realize what a great resource a card catalog of articles would be. Then when I had almost given up, I found *Tropical Fish Hobbyist*, October 1992.

On the center bottom cover was the teaser "Rainbow Mania" and the brilliant red fish pictured above was, I later learned, a *Glossolepis incisus*. I learned several things from the article "Keeping and Breeding Rainbowfishes" by Ray Hunziker and accompanying photos.

1. Two of the seven were *M. boesemani*. Both are males and as adults show excellent color.
2. Three fish were *M. trifasciata* (Goyder River). All of these were males. These have to be the most beautiful freshwater fish I have ever owned.
3. The last two were a pair of *M. splendida inornata*. These two after several weeks were producing spawns weekly. I now have a third generation spawning from these fish.

4. Rainbows “. . . seek shelter in tangles of driftwood and thickets of aquatic plants.” I was fortunate to have a 20 gallon plant tank heavily stocked with Java fern and Java moss. I placed half a dozen Java ferns and numerous handfuls of Java moss among several large pieces of driftwood into the 55 gallon tank. This supplied the rainbows with not only security and an excellent spawning medium, but also a food source. All the rainbows were observed daily feeding on the Java moss.

In fact this article was my rainbow bible and only source of guidance for several months. My many thanks to Mr. Ray Hunziker and *TFH* magazine.

My initial feelings have changed from disdain to complete obsession to possess and study these beautiful and fascinating fishes. Most recently I obtained a copy of Mr. Allen’s book “Rainbowfishes: In Nature and in the Aquarium.” I consider this text the most important in my personal library.

I am now in the process of obtaining a breeding nucleus of *M. praecox*. The recent issue of the *Rainbow Times* and its three *M. praecox* articles couldn’t have been more appreciated by myself.

Dan Helwig		
26 N. Albemaria Street		
York, PA 17403		(717) 854-1043
Available		
<i>Chilatherina</i> “Mamberano River”	juveniles	\$4.00 each
Express shipping only.		
Wanted		
<i>M. s. australis</i>	bright red tail - possibly Drysdale River or Roe River. Will trade.	

1/20/97

John D. Elwood		
416 W. Water		
Portland, IN 47371		(219) 726-4438
Wanted		
<i>P. connieae</i> , <i>P. furcatus</i> , <i>P. gertrudae</i> , <i>P. mellis</i> , <i>P. paskai</i> , <i>P. signifer</i>		

CO₂ on the Cheap

by Trevor Voevodin

About two years ago I built a trickle filter for my 5 foot tank. The trickle filter worked well for the fish but stripped the CO₂ out so the plants were not too happy. The price of a CO₂ system from the stores was very expensive, so I decided to try to build up a system myself.

I found that there was available, a 2.5 kilogram aluminum body CO₂ fire extinguisher. The gas people, CIG, could supply a tap to screw into the top of the aluminum body but the threads did not match. They suggested I take their tap to a machine shop. So for \$5 I had the brass tap turned down to match the bottle's thread. The cost of the extinguisher body was \$55 and the tap cost \$32 - plus \$5 to turn down. Next I required a regulator. New, these cost \$95; reconditioned, they sell for \$50. Then to allow precise control of the amount of the CO₂ being released required a flow control, which cost \$54 new. As I wanted to have the CO₂ released for a short period of time each day, I purchased a 240 volt solenoid (I made sure that the solenoid was type used for gas) at a cost of \$42. A normal 240 volt timer and some tubing completed the supply list at a cost of \$60. So all up the whole system cost \$293 plus \$13 to fill the bottle with CO₂. Parts are shown in Photo A.

Now how to get the CO₂ into the water? You take a pipe from the solenoid and run it to the perforated air disperser which I put under the filter wool in the submerged part of the trickle filter. See Photo B. You will notice in the photo that there is a bubble of CO₂ trapped between the coral rubble and the filter wool. The regulator is only just turned on and the flow control is set to 1/4 turn. The timer is set to operate the solenoid for 3 minutes and comes on at 7 p.m. and stops at 7:03 p.m. CO₂ flows through the solenoid, fills the tube and gradually forms bubbles under the filter wool.

As the water is flowing past the bubbles, it gradually absorbs the CO₂. It takes about 4 hours after the first time you operate the system for the CO₂ levels in the tank to rise. Control of the time and flow will control the levels of CO₂ you have in your tank. The CO₂ in the cylinder lasts about 1 year so it is very economical.

Has the CO₂ system been a success? Well the plants seem to be happy and it hasn't affected the fish. It was fun to design and did not cost the Earth. So my wife is happy!

Ed. Note: The RSG BOD is uncertain of the legal ramifications of altering a commercially available fire extinguisher. Readers are encouraged to consult local ordinances prior to such alterations. The author, Trevor Voevodin, has

made himself available for questions and can be contacted at: 26 Urquhart Street, Carindale 4152, Brisbane, Queensland, Australia or E-mail at Voevodin@msn.com.

Cary Hostrawser	caryho@ix.netcom.com
12920 Zachary Cr N	
Dayton, MN 55327	(612) 422-9446

Available

<i>I. weneri</i>	\$15/mop
<i>M. affinis</i> , Emas Lake	\$15/mop
<i>M. arfakensis</i>	\$15/mop
<i>M. lacustris</i>	\$15/mop
<i>M. misoolensis</i> , Batanta	\$20/mop
<i>M. papuae</i>	\$15/mop
<i>M. praecox</i>	\$15/mop
<i>M. splendida rubrostriata</i>	\$15/mop
<i>P. furcatus</i>	\$15/dozen eggs
<i>P. gertrudae</i> , Giddy River	\$15/dozen eggs
<i>P. gertrudae</i> , Goanna Lagoon	\$15/dozen eggs

These and others are available depending on the amorous intents of the fish. Please call before ordering to see what's happening. May also have some peacock gudgeons available shortly.

Kevin Hosmer	DLHOSMER@aol.com
RR 3 Box 4353	
Milton, VT 05468	(802) 524-7309

Available

<i>P. gertrudae</i> , Giddy River	available in quantity
<i>G. incisus</i>	juveniles only
<i>G. wanamensis</i>	eggs only

Care and Spawning of *Pseudomugil Cyanodorsalis*

by John K. Boylan

Pseudomugil cyanodorsalis is a small, 2-3 cm, member of the “blue-eyed” rainbowfish group. This species is found in northwestern Australia where it inhabits coastal streams and estuaries. It is reported to be quite abundant in its native habitat. This habitat varies from fresh to brackish to saltwater depending on tidal influences. This type of environment must be taken into account when keeping this species.

This small rainbow is very rare in the hobby which is truly unfortunate given its beauty. As the name implies, this species has some blue color on its body. Actually this color is an electric blue horizontal band that runs along the upper half of this specie’s flanks. This color is present in both sexes but is much more intense in the male, especially when courting or displaying to other males. On the female the remaining fins are clear and the basic ground color is a silver-gray. On immature males the ground color is a silver-gray. However adult males develop a yellow-gold ground color. The first ray of the males’ dorsal fin is elongated and black in color. The remaining part of the dorsal is yellow-white. The anal fin mirrors this shape and color pattern. The ventral fins are also black tipped. The caudal fin has yellow-white upper and lower inner margins with black outer margins. Adjectives can not describe the sight of two adult males flaring and prancing around each other in natural sunlight.

Keeping this species is not all that difficult so long as one remembers its origins. Some salt in the water is a must. How much is debatable. I have maintained this species in water that contained maybe a teaspoon of salt mix per gallon up to water that had a specific gravity of 1.024. I currently maintain my fish in water with a specific gravity of 1.02. Water changes of roughly 20% are carried out twice per week. A handful of crushed coral is added to the tank to help buffer the water. The water temperature is maintained at 78°F. Feeding is not difficult so long as the food is small enough for this species to eat. I feed primarily baby brine shrimp, but also mix in occasional feedings of daphnia, mosquito larva and rarely white worms or a flake food. With the salt content of their water baby brine shrimp survive quite well and those not eaten during my morning feeding become snacks during the day. This very nicely eliminates the pressure of trying to find a way to feed them during the workday. To thrive this species needs several feedings per day. For keeping and breeding I maintain this species in a 10 gallon tank. Filtration is via a small box filter. Due to the salt content of the water, live plants are excluded in their tank. However I do include 2 or 3 floating mops to provide cover and a breeding site. These mops are light green in color and extend to the bottom of the tank.

Breeding this species proved problematic for me the first time I maintained them. I kept my initial stock in water containing a teaspoon of salt per gallon. While the fish looked good they produced only 6 eggs over the course of a year. I later learned that the secret to breeding this species was keeping them in salt water. My next experience with this species came two years later. I acquired five pairs and placed them into a 10 gallon tank with a specific gravity of 1.012. I then alternated between pure saltwater and pure freshwater during my water changes. For some reason unknown to me I began to lose fish. One day they were fine and the next - dead. This usually occurred after a water change using freshwater. It was only after my stock had been reduced to one pair that I discontinued the freshwater changes and stuck with saltwater, specific gravity 1.022-1.024. (Hey, I never claimed to be a rocket scientist!) With this last pair I finally began to find a few eggs, about 12, before the female died.

These dozen eggs were treated with “kid gloves”. Hatching at approximately 12 days, the fry were started off with vinegar eels and kept in a small container which I floated in the parent’s tank to maintain a consistent temperature. After about a week I switched the fry over to baby brine shrimp and placed them in a mesh breeding trap floating in the tank. One day as I was peering into the tank to check on my treasured group of fry I noticed a fry outside of the trap. I was shocked. Had one of the fry escaped? If so, it was doing quite well and was bigger than any of the “well cared” for fry. Then I noticed another fry and another. In the end I counted two dozen fry outside of the trap. All were doing well and many were bigger than the fry in the trap. It seemed that *Ps. cyanodorsalis* were spawning in the bottom level of the floating mops and in the crushed coral on the tank floor. I discovered this by accident when I pulled out one of the mops and did a thorough check. I found no eggs at the top, the expected location for the eggs, and found a number of developing eggs at the very bottom of the mop. None of the people I have talked to, either before that incident or after, have ever had this experience. Everyone stated that in their experience *Ps. cyanodorsalis* was a top spawner. Adult fish, as I found out, were no threat to the fry. In addition the fry could eat baby brine shrimp at hatching.

I maintained the fry in water with a specific gravity of 1.022-1.024 and a temperature of 82°F. This worked quite well and the fry put on size and were spawning at 3 months of age. But this was not without problems. At this higher temperature and specific gravity I was finding a few fry dead every day. Some died with no apparent outward reason. While others developed a growth, or deformity, on the lower jaws which killed them within a week. The breeder from whom I had obtained my stock had cautioned me about this malady and suggested that alternating between fresh and saltwater on the water changes would cure this. In addition the fish never obtained the bright colors of the first group I had kept. From this second generation of fish I ended up with numerous eggs but heavy losses reduced this number to six. Feeling that a change was in

order I slowly lowered the temperature to 78°F. I then began to lower the specific gravity to a point where it now registers 1.018-1.02. Since I have made these changes no fish have been lost. The six remaining fish turned out to be three pairs. And lo and behold, the fish started to color up! They have not yet reached the bright colors of my original group but they are getting close. Given the fact that they are only three months old I suspect these colors will intensify as they get older. And oh yes, they are also starting to spawn!

While *Pseudomugil cyanodorsalis* is not your typical rainbow, it does present some challenges. Its beauty makes it well worth the effort.

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Available

C. bleheri, *C. sentaniensis*, *G. ramuensis*, *G. wanamensis*, *I. werneri*, *M. boesemani*, *M. goldiei*, *M. herbertaxelrodi*, *M. lacustris*, *M. nigrans* (Scott's Creek), *M. parkinsoni*, *M. praecox*, *M. s. tatei* (Thompson River), *M. trifasciata* (Goyder River, Skull Creek, Wonga Creek), *P. furcatus*, *P. gertrudae* (Giddy River), *P. signifer* (Bool Creek., Harvey's Creek), *T. ocellicauda*

All mops are \$15US. *Pseudomugils* are available as eggs : \$15US/dozen. Mailing costs are extra. Shipping begins in mid April. Order now for early delivery.

We also accept trades. Give us a shout as we also like to "talk" fish!

We will supply mops and vials of eggs of any of the species listed. We have juveniles available from time to time. Call or E-mail to order or receive more information.

1/3/97

Meet the RSG

by Peter Unmack

Sherry & Carl Taylor

In January 1996 I had the good fortune to be treated to some good ol' Southern hospitality by Sherry and Carl Taylor in Cookeville, Tennessee. Sherry and Carl have a "special" bond with the RSG since they met each other through the RSG in 1989. Believe it or not, Sherry is originally from upstate New York while Carl was born in Tennessee. An unlikely pair perhaps? No civil war between these folks though. their fishroom contains a range of critters, including 2 poison arrow frog species, a Madagascar day gecko, a pair of Golden Mantilla frogs, and at least 50 or 60 species of carnivorous plants (some of which Carl was the first to bring into or propagate in the US). Their aquariums house killifishes, African Rift Lake cichlids, gobies, guppies, and - of course - rainbowfishes.

What started your interest in fishkeeping?

Sherry: My interest began as a young girl with the guppies kept by my stepmother. I also fished the St. Lawrence River and caught native large-mouth bass, perch and sunfish. I finally bought my first aquarium at a yard sale when my son was around 6. I promptly and mistakenly put angelfish in with tiger barbs. (I'll leave it to your imagination as to what happened next...) To compound my problems, I recalled that my stepmother would carry her 2.5 gallon tank to the kitchen sink periodically to clean it, so naturally I tried it with my 5 gallon tank - until it sprung a leak. I kept replacing my tank every few months as for some reason each one would spring a leak after awhile or the base would crack. Eventually I learned that you aren't supposed to move full tanks! After a couple of years, I lost interest and put the tanks in my attic. Several years later a friend spotted the tanks and offered to help me set them up again, telling me some of the things I'd done wrong. My next mistake was to pick up a pretty rock from my yard, clean it well with a toothbrush and dishwashing detergent, and rinse it under the faucet. Oddly enough, it took awhile before I figured out why all of my fish except an Emerald Catfish kept dying.... I saw a notice for the annual auction of the Central New York Aquarium Society, went to it, and ended up joining. I soon had 14 tanks of various sizes spread around the house. I kept a wide range of fish, including livebearers, cichlids, native darters, goldfish, and rainbows - pretty much what I like and maintain today.

Carl: When I was a child, my grandmother took me to a variety store and we brought home some platties, mollies and guppies along with a 5 gallon tank. I obtained my very own first fishtank when I was about 13 and maintained it for 3 or 4 years, packing it in when I went to college. After college, when I was

around 21, I started a marine fishtank and 2 or 3 freshwater tanks. From age 12, I had been heavily into carnivorous plants, and that is my main hobby today, although the fish come a very close second. Around 1`984 I started up 3 marine tanks for a few years, then started keeping freshwater fish again, such as guppies, killies and rainbows. Before I met Sherry, I had between 10 and 15 larger tanks at various times.

How did you get into rainbows?

Sherry: I was at an American Livebearer Association show sponsored by the Medina Aquarium Society in Ohio. While visiting the petshops there, I picked up 3 species, which seemed both attractive and peaceful.

Carl: I was in a petshop in Nashville, and a group of M. Boesemani caught my eye. A year later, I found out about the RSG and discovered there were many more species available.

Favorite rainbowfish?

Sherry: G. wanamensis.

Carl: M. boesemani.

What was your greatest misconception regarding rainbowfish?

Sherry: That they'd be easy to maintain.

Carl: That they'd be easy to breed.

Biggest mistake with rainbows?

Sherry: They require really good water quality.

Carl: Using light colored gravel or none at all. They look much nicer in a carefully set up aquarium with dark gravel and live plants.

Greatest frustration with rainbows?

Sherry: Getting time to watch them and give them the extra attention they need.

Carl: How slow they grow.

How did you get involved with the RSG?

Sherry: I joined in late 1987 or early 1988 and went to ICC-I to see Gary Lange and Dr. Gerald Allen. After some haggling, I convinced Gary he couldn't do all jobs himself, and he relinquished membership / treasurer to me around 1989, taking back the treasurer responsibilities when Carl and I moved to Tennessee in 1994 and I became too busy to handle it. I'm still Membership Chairman, and it's great. I get to know more people in the club. By taking on a job, you really have to become more involved, making you feel like a real part of it.

Carl: A friend and I visited Richard Harding, a friend who owns Exotic Tropicals in Cookeville, TN, and he had just gotten in some rainbows. None of us know much about them, and then we saw the RSG listing in one of the fish magazines. I got elected to contact the person listed, who was Sherry. I called, she answered, and a year later we got married.

The “other half”

Sherry, what are the worst aspects of Carl's fishkeeping

Carl keeps too many killies and I have to share the rainbows with him.

Carl, what are the worst aspects of Sherry's fishkeeping

I worry about whether Sherry is going to fill the fishroom with too many cichlids and that I'm going to have to fill it up with my fish first!

What are the good aspects?

Both: We get to share our love of the hobby and encourage each other's addiction. We can split the tasks that we don't like doing between us. For instance, Sherry doesn't do well with live foods but Carl is excellent. We get to go to fishy events together and we don't have to lie about how much we spend on the fishroom!

Species Maintenance Report - The Breeders' Circle

by Cary Hostrawser

We've had our first census report and census is in the works. This has given us an idea of the present number of rainbow species in North America. I expect to see that the variety of rainbows available to us is increasing. Its now time to start doing something about what we have.

What I'm asking for now is for people to commit to keeping species long term. Many of us have depended on a few keepers of rainbows to always have that replacement stock should we desire it. The problem here should be obvious. There are only so many big rainbow keepers around and they can't keep all the species going alone. On top of that, with only one person maintaining a species, spawning brother to sister for generations, all the genetic diversity is being lost. And if the one breeder that is keeping that species happens to loose that stock then they're lost. It's not always easy or cheap to obtain these fish from out of the country and sometimes downright impossible.

It's now time to form breeding circles. These would each be a group of people committed to a species. Each person in these circles would work to keep the species going and trade stock within the circle to maintain the diversity of the gene pool and viability of the species.

I am now calling on our members to begin forming these circles. How are we going to form them? Just contact me via letter, phone or E-mail and let me know what species you'd like to help maintain. Also, let me know if you'd be willing to be the leader of one of these circles. I'll work to get people together that have an interest in the same species.

Now I suppose you're wondering what your responsibilities will be if you offer to lead a circle? It's not really that difficult. Just keep in contact with the members of the circle and send in a yearly update. The update should include information such as success or problems in breeding the species, what trading of stock between circle members has occurred, how long are the fish living or anything else you feel may be of importance regarding the species. I'll provide more detailed information should you choose to be a leader.

If you're a member of a breeding circle your task is even simpler yet. All you have to do is raise and keep your fish healthy. Yes, unlike other programs, these fish stay your fish even if you leave the program. Also you'll have to keep in contact with your circle leader. Let him or her know how the fish are doing, what tricks you may have learned to keep them healthy and breeding. Again anything that you feel may be important to keeping these fish going. And of course we want you to trade stock with other members in the circle. This will keep your fish genetically diverse.

In essence, we want our breeders' groups to keep their fish healthy and genetically diverse. We want our breeders' circles to become our experts on the species they keep and pass that knowledge back to the club as a whole. We want our breeders' circles to become the source for healthy genetically diverse stock for future rainbowfish keepers.

Now, if I haven't convinced you to get involved by helping you maintain healthy stock, then I'll give you a few more reasons why you should join a breeders' circle.

1 Trade bait.

You'll become known as a source for healthy pure fish. What better thing to have to trade for those fish you want.

2 Experienced help.

You'll know other people keeping the same fish to help you out when you're having problems.

3 Networking.

By getting to know other members you'll hear about where those other rare fish you want are.

4 Guido.

If you don't join a breeders' circle I'm going to send him after you (just kidding).

Ideally, we'll have at least four people in each breeders' circle. The members of the breeders' circles will work amongst themselves to determine what is best for the species they keep. Some general guidelines are as follows: Try to keep the original stock going as long as possible. You'll want to have a back up generation going at all times. Try to keep this back up generation as young as possible, but from as large a group of parents as possible.

For example - Let's say you had a breeding group of ten rainbows. You spawn these fish and have a group of 20 young adults you're considering passing on. But you notice your original breeding group isn't producing many eggs and is down to six individuals. Now may be the time to change to your new breeder generation or at least hang onto the stock you have. If your old generation is getting old and loosing fertility, you may be down to only a couple of fish that are actually producing eggs. This is what we don't want to happen. We need to keep our stock as long as possible but not to the point that we're loosing our group spawning ability. A group spawn should contain the eggs and sperm from multiple individuals. The more individuals the better.

Being in a breeders' circle, you have a couple of options. You may want to send your old breeders to another member of your circle with older stock. In this case you'd also want to send some of your younger stock to him. In return

you should obtain some younger stock from him to further mix your new breeder group or from another member of the circle.

Or, you may obtain the older stock of other circle members to increase the number of your breeding group. In this case you'd probably want to pick up some younger stock from them. After all, this is a generation that is quite likely not going to be around for too much longer. You'd also send some of your young generation to him or another circle member.

You may notice this all has a common thread. Keeping the breeding group as large as possible and passing fish from different parents amongst the breeder circle members. This will keep the number of alleles in the species gene pool as diverse as possible. Another possibility is for every circle member to send another member a mop each year. These fry could be mixed with a group of fry from your own group. Again, we would be insuring that there is always a diverse population of fish to replace an aging breeder group. Another possibility is trading the same sex fish at intervals. If each member of a circle sent all their females to another member of the circle, we would also get a good mixing of alleles. This would be the preferred method with single pair spawning species. It all comes down to spawning large breeding groups and mixing these fish at least once every generation. Each breeders' circle can use its own method or variety of methods. Oh, I almost forgot one more thing as long as you're in touch with these other members, don't forget to do a little swapping for those other fish you were looking for.

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12/20/96

RSG STORE

Send requests for items to:

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Payable in U.S. funds only, checks payable to the Rainbowfish Study Group.

If you would like to order larger quantities of any item(s), we'll check UPS rates. If you have any questions you can call me, Gary Lange, in the evenings (6-10 CST & most weekends until 10 pm CST) at (314) 837-6181 or E-mail at GWLANGE@STLNET.COM

- Poster: Blue-eyes and Australian Rainbowfishes
Unsigned copies are \$10 and signed copies are \$15.

Shipping & Mailing Tube for posters:

U.S.:	1 @ \$2.70	2 @ \$2.95	3 @ \$3.20	4 @ \$3.65	5-18 @ \$4.00
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- T-shirts

This is a Karen Randall design depicting *P. furcata* and *M. praecox* (the neon rainbow). "Rainbowfish Study Group" proudly arches in rainbow colors over the top of artwork while "Living Color" balances below. A quality shirt was used in the process - Fruit of the Loom "Best", a 50/50 cotton/polyester blend. There really isn't any shrinkage. As with all shirts with a silkscreen design it should be washed in cold water and drip-dried.
L & XL: \$12. XXL: \$13.

Shipping & Mailer for T-shirts:

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Shipping & Mailer for Combinations:

U.S.:	1 @ \$3.00	2 @ \$4.00	3 @ \$5.00
Canada:	1 @ \$4.07	2 @ \$5.67	

- Best of RSG

This is a compilation of the best articles originally published in the Rainbow Times - encompassing (approximately) the first 7 years of publication.

RSG book with shipping

U.S.	book rate	\$13.50
Canada	surface	\$14.00
	air	\$15.00
Overseas	surface	\$15.00
	air	\$18.00

Welcome New RSG Members

Michael Adams Jr., 2083 Rainbow Rd., Lexington, KY, 40503, (606) 278-7093

Jo Batson, 924 S. Forest Dr., Birmingham, AL, 35209, (205) 879-6921

Ernest Burnes, 1816 Glen Ridge Rd., Baltimore, MD, 21234

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Ken Walker, 473 Columbia Rd., Bay Village, OH, 44140, (216) 835-3462

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