

THE RAINBOW TIMES

Volume 10/Number 3



Melanotaenia trifasciata, Goyder River
photo by Gary Lange

The Rainbowfish Study Group, Inc.

RSG BOARD OF DIRECTORS

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USA AND CANADA - \$10.00 per year/4 issues

INTERNATIONAL - \$15.00 per year/4 issues (Airmailed)

Make checks out to the Rainbowfish Study Group. Send to Sherry Taylor at address above.

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.

I thought of this as the Incredible Shrinking Issue every time I considered working on it for the past three months. I will spare the details but simply state that instead of gathering material for 24 pages, I gradually lost ground. Then in early June I was overwhelmed with material from Gary Lange. I suddenly had difficulty making everything fit! Fish and egg listings were condensed and details were omitted. Sincerest regrets for any inconveniences this may cause.

In March I received information from Harro Hieronimus (via Gary Lange) about the IRG conference in Arkel, The Netherlands. It is underway as I type this - June 6-8! It is obvious that *The Rainbow Times* could not assist with promoting this event. If anyone attended - perhaps a recount of the event could be submitted for the enjoyment of our members and future promotion of the IRG.

It seems that periodically I get telephone calls from members stating that they missed an issue. Historically there has been a lag of several weeks in transfer of information within the RSG. As a result, members are notified of their impending expiration upon receipt of their fourth issue (address label), given a stricter warning upon receipt of a fifth issue (address label w/sticker) and finally notified of cancellation with a postcard in lieu of a sixth issue. Please recall that membership includes only four issues - not five! Even with this system, it is possible that a renewal may "fall between the tanks". Upon review of various correspondence & dates, I often come to the conclusion that difficulties arise when renewal does not occur promptly. So **Please renew promptly.**

Please note availability of *P. paludicola* - a pleasant little species I thought had disappeared! It is available from Steven Polk. See page 22.

The RSG still could use a volunteer as Corresponding Secretary and we now could use some assistance with an Audio / Visual coordinator.

Please note your expiration code on your address label!

Expiration Code 1002 is **overdue** and will be removed from our mailing list.

Expiration Code 1003 is due **now**.

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

CHAIRMAN'S REPORT . . .

Gary Lange

The Convention – Cut out the registration form add a check and mail it in – ASAP! You'll save yourself \$5 if you do it before July 1st. You'll also save some on the banquet if you sign up at the same time. Banquets are a great place to meet and chat with the speakers after the busy day. Often the most interesting and informative conversations occur after the formal talks so I'd encourage all of you to attend it too. When you register and you think you might want a T-shirt – Please write on the bottom of the form "Kim, I want a T-shirt". The costs will be somewhere in the \$10-12 range, depending on how many will be ordered. The T-shirt will have a photo of a Goyder river trifasciata, similar to the photo that is on the front of this issue. We certainly look forward to seeing many of our West Coast members at this affair.

Those of you that will have to travel from the Midwest or East Coast, there's no better place to visit than San Francisco. Make your plans to arrive early on Friday (see show article) or even arrive a day early and make a trip down to the Monterey aquarium.

Help us Advertise – If you think your club would like to advertise our convention please get hold of me as soon as possible. If you have an e-mail address (or your editor's e-mail address) it would be especially helpful so that they don't have to worry about typing it. We will have a basic ¼ to ½ page announcement so it won't take up too much space.

The Poster Auction – To help raise some more funds for this convention (remember we just bought 3 overseas tickets) I thought it might be fun to have a little silent auction of 3 signed Jerry Allen posters. I'd like to start the bidding at \$30 EACH, postpaid. What you say, you can get a signed copy for \$15 and some postage so WHY would you want to spend \$30 for the same thing??? What if it was poster #1 from 1989 that has most of the rainbowfishes of New Guinea on it? (The current one has the rainbows of Australia and the blue-eyes on it). That's the one! Anyway, the bidding opens when you get this newsletter. I will take bids until August 1st, we'll notify the 3 highest bidders and they'll have 2 weeks to send out their checks. Posters can be mailed or hand-delivered to the convention.

The Breeder's Circle – In our last newsletter Cary outlined his ideas on the breeder's circle. Keeping our rainbows going is important and it really takes a coordinated effort to make sure that we continue to keep the fish going. If you would like to get involved, please give Cary a call.

I will be speaking at the Milwaukee Aquarium Society meeting on June 27th, see Ray Gettler (414) 662-5591. I'll also be speaking on bows at the Minnesota Aquarium Society on August 7th. Looks like I'll also be doing a photo workshop on that Saturday too. For further information see Cary Hostrawser (612) 422-9446 {or e-mail to CARYHO@aol.com}. I'll also be out and about in the Philadelphia area later in the fall and in Cincinnati early December. We'll have those details in the next issue.

On May 10, 1997 at 11:32 p.m. CST the Hostrawser family welcomed in their newest addition, Sasha Monique Hostrawser. Weighing in at 8lbs 4 oz she beat out her older sister's birth weight by 1 oz. She measured 21 inches and has red hair. Congratulations.

Dan Helwig
26 N. Albemaria Street
York, PA 17403

(717) 854-1043

Available

Chilatherina "Mamberano River"

juveniles

\$4.00 each

Express shipping only.

Wanted

M. s. australis

bright red tail - possibly Drysdale River
or Roe River. Will trade.

1/20/97

Gary Lange
2590 Cheshire
Florissant, MO 63033

gwlange@STLNET.com

(314) 837-6181

(7-10pm CST weekday & most weekends)

Species Potentially Available

M. irianjaya, *M. trifasciata* "Canoe Creek", *M. arfakensis*, *M. goldiei*, *M. lacustris*, *M. boesemani* Ekk-Will strain, *M. herbertaxelrodi*, *M. parkinsoni*, *M. duboulayi* "Ocean Lake", *M. trifasciata* "Coen River", *C. sentaniensis*, *M. praecox*, *M. trifasciata* "Giddy River", *M. trifasciata* "Wonga Creek", *M. papuae*, *M. splendida* "Utchee Creek", *Melanotaenia* "eachamensis"
"Lake Euromo type"

Mop prices vary by type of species: typically \$10-\$15/mop. Shipping \$4/box, you keep styro. Please no orders over 4 species at a time OR list plenty of alternates as the bows don't all get amorous at the same time.

6/5/97

OFF THE NET . . .

Michael Adams, Jr.

Rainbowfish Study Group:

<http://home.STLNET.COM/~gwlange/rainbowfish.index.htm>

Australian and New Guinea Fishes Association:

<http://www.angfa.org/>

British Rainbowfish and Goby Society:

<http://ourworld.compuserve.com/homepages/leneldridge>

Internationale Gesellschaft fur Regenbogenfische

<http://www.aquanet.de/Vereine/IRG/>

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

Cary Hostrawser

caryho@ix.netcom.com

12920 Zachary Cr. N

Dayton, MN 55327

(612) 422-9446

Available

I. weneri, *M. affinis*, Emas Lakes, *M. arfakensis*, *M. misoolensis* "Batanta", *M. papuae*, *M. parkinsoni*, *M. praecox*, *M. splendida rubrostriata*, *M. trifasciata* "Upper Coen River", *P. furcatus*, *P. gertrudae* "Giddy River", *P. gertrudae* "Goanna Lagoon"

Availability dependent upon the amorous intentions of the fish. Mop prices are typically \$15/mop. Please contact me before ordering. Shipping runs \$5 for up to three mops. Please return the container or send a container with the order. One replacement mop will be provided for the cost of shipping should the mop fail. Fish shipped at buyer's risk, you choose your preferred method.

3/21/97

Rainbowfish '97

September 19th - 21st in San Francisco

by Gary Lange

Plans for the '97 Rainbowfish Convention are well under way. The Rainbowfish Study Group, together with the San Francisco Aquarium Society are going to make this THE place to be if you're into rainbows. This is the biggest lineup of rainbowfish speakers to ever appear in the US. Due to the costs of bringing in this quantity of out-of-country speakers I don't think you'll see this again for some time to come. I've had a lot of requests from people out on the West Coast to please have a convention out there. Well, here's your chance. Please plan on attending and making this the biggest convention ever. Get your Pre-registration discount by sending in your form by July 1st. I know that the hotel prices are a bit steep but hotel prices in the San Francisco area can be outrageous. If you are looking to double up with a bownut to save costs send your requests to me (Gary Lange) and we'll see if we can match you up. We will have MAJOR speakers starting on Friday evening so plan to enjoy the entire experience. Plans are incomplete but we might be doing some behind the aquarium scenes Friday afternoon. Our auction is on Sunday and I can tell you that a lot of people are working hard at trying to produce a large variety of fish for this show. Please pitch in and bring some bows or other items for auction. Remember it's a 75% split, in your favor. I've heard a rumor that a small group of individuals are already planning on bringing some 18 species alone between them so this really is going to be the place to pick up rainbows. We will also have a great display of dry-goods that you'll be able to view during the weekend, thanks to Ray Lucas of Kingfish Services. Ray does an extremely professional job of displaying the aquarium products. If you have questions about something chances are that he'll have the answer because he really knows his product. If you get a chance you might visit his website at <http://www.kkreate.com/kingfish/kingfish.htm>. If you're hailing from the Midwest or the East, this is a great time to visit San Francisco. There really is a lot to do in this area so plan to stay for either a few days before the convention or a few days afterwards. We will also have a limited number of RSG items for sale there. Buy your items ahead of time, (without postage & packaging of course) and pick it up at the show. By the way - prices on the Best of the RSG w/o shipping are \$12.50.

If you are a "local" and not connected with the San Francisco Aquarium Society, please give Kim Goodwin a call (510) 839-5681 or better e-mail her an e-mail (fishgirl@ix.netcom.com). As the time grows nearer I'm sure there are things we haven't even thought of yet. One of the things we still have to work out is a possible place to store some bows before the auction so we might even need to borrow some clean tanks with healthy biological filters. If you can help

please contact her as soon as possible. If you are on the net you might also bookmark the SFAS web site <http://www.sfaquarium.org/> as updated material will be appearing on that site.

Three of our speakers hail from Australia and the fourth comes from Belgium. Let me tell you a little bit about our speakers.

- Dr. Gerald Allen

If you don't of him and you're really interested in rainbows you must be living under a rock! Dr. Allen produced two of the most influential books in the last dozen years concerning rainbowfish. If you're "into bows" you have to have the classic "Rainbowfishes of Australia and PNG" and his new one "Rainbowfishes in Nature and the Aquarium". Dr. Allen will give us two talks dealing with some of his very recent travels to Papua New Guinea and Irian Jaya. We have tentatively set some time aside to talk on the future of rainbowfish at the banquet. The following summaries were provided by Dr. Allen.

1. Irian Jaya Rainbows and the Freeport Connection

At the beginning of 1996 a team of biologists working in the Lorentz Reserve of Irian Jaya were taken hostage by OPM rebels. They were eventually released 5 months later, but unfortunately both army and civilian lives were lost during the rescue operation. Consequently biological fieldwork is currently prohibited within the province of Irian Jaya. The ban has been in effect for one year and could be extended for at least another 1-2 years.

My first thoughts were that I would have to abandon the survey of Irian Jaya fishes I commenced in 1995 and which is being sponsored by the National Geographic Society. But thanks to the Freeport Indonesia Company, a huge gold and copper mining operation in the heart of one of Irian Jaya's richest wildlife areas, I have been able to continue fieldwork. Freeport has generated a lot of negative publicity among conservationists due to environmental damage caused by tailings deposition. However, the company has recently pumped millions of dollars into an environmental recovery program. Significant funds have also been allocated to flora and fauna surveys. Most importantly, as far as my fish work is concerned, the overall Irian Jaya research ban does not apply to scientists who are working for Freeport within their mining concession area.

My talk will focus on two visits to the Timika area in 1997. Although further surveys are required the region is one of the richest for fishes in New Guinea. More than 85 species have been collected so far, including a very healthy rainbowfish and blue-eye fauna. The immediate vicinity of Timika is home to at least three species of rainbows and six species of blue-eyes. I will also talk about my experiences at Etna Bay, the site of a geological exploration camp and some incredible previously unexplored lakes.

2. Lake kamu - Lost Wilderness of Papua New Guinea

In November 1996 I had an opportunity to participate in a Conservation International biological survey of the Lake kamu basin in Papua New Guinea. The area is situated approximately 150 km northwest of Port Moresby on the southern slope of the Central Dividing Range. It's very remote and the site of the famous Bulldog Track, important supplies line during World War II. Although my participation lasted only 12 days, it was definitely one of my best trips to New Guinea. Conservation International has a well-established jungle camp and I made daily forays on foot, ranging as far as 8 km each day in search of fishes. Much of the collecting effort was focused on the nearby Sapoi River, a major tributary of the Lake kamu. The camp was situated in an interesting transitional area, where the stream completely changed character from a slow, meandering lowland water course to a mountain torrent. This afforded a rare opportunity to have a close look at the effect of current speed and waterfall barriers on the upstream movement of various fish species.

Only 23 species were collected, but two were previously unknown to science, including a new rainbowfish and the first sicydiine goby to be recorded from southern New Guinea. The strikingly-colored goby inhabits mountainous streams among rapids where it uses its peculiar pelvic fin disk to cling onto the surface of boulders.

- Neil Armstrong

Neil is one of the best photographers of rainbowfishes in the world! It is difficult to imagine just how hard it is to take a good picture of a rainbowfish unless you've spent countless hours trying to get one in focus. Besides just keeping and photographing native fishes Neil has also made quite a few trips "outback". During his talks we will not only witness the beauty of the fishes that they've surveyed but also the beauty of the collecting environment. Neil will be giving two talks. Make note that one of those talks is on Friday evening, so if you are one of the stragglers that wander in late you'll miss it. Neil's first talk will be titled something like "The Beauty of Rainbowfishes". He has so

many great slides of bows that I wanted you to see as many of them as possible. His second talk will be "Collecting in Arnhemland". That is a very special place in the far northern part of Australia, home of the Goyder River rainbow. It is extremely difficult to obtain permission to collect in these regions as the native people of Australia control them.

- Bruce Hansen

Since Dr. Hansen was going to be traveling over with Neil Armstrong I thought I would see if we could press him into duty and have him tell us about some of the beautiful Blue-eyes that he has kept. He graciously obliged. Bruce is also the current president of ANGFA so hopefully you'll be able to see some of the publications that they have been producing over the last 14 years or so at the convention.

Bruce has been keeping aquarium fish off and on for 40 years or so. Australian native fish have been his interest for the past 14 years, especially those he has collected himself as his regular outback expeditions to the northern parts of Australia.

Although the smaller species, especially Blue-eyes, are favourites, he keeps a wide range of genera (from *Ambassis* (glassfish) to *Zenarchopterus* (needlefish)) and at present is focusing on gobies and gudgeons to try to ascertain their needs under aquarium conditions.

An ardent believer in the educational role of the hobby, he regularly supports ANGFA's journal, *Fishes of Sahul*, with articles on his trip and experiences. He also is a keen "bibliophile" and maintains a personal library of some 1800 plus titles with "aquatica" dominating, especially that pertaining to Australia, PNG and New Zealand.

- Gilbert Maebe

Gilbert is a long time member of the European Rainbowfish Group, the IRG. Gilbert has made several trips collecting to Australia and is an avid hobbyist. Gilbert will provide 2 talks on Saturday including "Pajinka, Collecting in Cape York", and will provide some of the entertainment for the Saturday Banquet with his short slide show "Sahul Symphony". On Sunday, before the auction he will do a third slide show entitled "History of Rainbowfishes".

- Cary Hostrawser

Cary is our only local (US) speaker for this conference at this time but his talk is vitally important to the success of the rainbowfish. As many of you already

know it can be very difficult to find quality fish at the local pet store. There are really only a few good wholesale operations in the US that provide quality, uncrossed rainbowfish. That really leaves it up to us to make sure that once we get a population established in North America that we keep it going. Among other things Cary will be explaining "The Breeder's Circle" and how you can join to help the cause.

RSG STORE

- Poster: Blue-eyes and Australian Rainbowfishes
Unsigned copies are \$10 and signed copies are \$15. **Buy a poster now for \$10.00 and have Dr. Allen personally sign it at the show!**

Shipping & Mailing Tube for posters:

U.S.:	1 @ \$2.70	2 @ \$2.95	3 @ \$3.20	4 @ \$3.65	5-18 @ \$4.00
Canada:	1 @ \$2.65	2 @ \$2.80	3 @ \$3.20	4 @ \$3.40	5-7 @ \$4.30
	(surface mail)				8-12 @ \$5.10

- 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. Fruit of the Loom "Best", a 50/50 cotton/polyester blend - little shrinkage. L & XL: \$12. XXL: \$13.

Shipping & Mailer for T-shirts:

U.S.:	1 @ \$3.00	2-3 @ \$3.60	4-5 @ \$4.60
Canada:	1 @ \$3.00	2 @ \$3.30	3 @ \$4.50

Combination: 1 Poster & 1 T-shirt

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. **Save postage costs! Order it now for \$12.50 and have it delivered at the convention.**

Best of RSG book with shipping

U.S.	book rate	\$14.50
Canada	surface	\$15.00
	air	\$16.00
Overseas	surface	\$16.00
	air	\$19.00

Save postage & packaging costs! Buy your store items now and have them delivered at the convention. Payable in U.S. funds only, checks payable to the Rainbowfish Study Group. Call Gary Lange (6pm -10pm CST & most weekends until 10pm CST) at (314) 837-6181 or E-mail at GWLANGE@STLNET.COM.

Rainbowfish '97

Discount Pre-Registration Due by July 1, 1997

Register Now! Conference and Banquet Prices Go Up after July 1!

The **Conference and Banquet Package** includes:

- Lectures by Dr. Gerald Allen, Neil Armstrong, Gilbert Maebe, and Bruce Hansen
- Free admission to the Dry Goods Auction and the Fish and Plant Auction!
- Discounted ticket for a multiple-course banquet meal & talk by Dr. Allen & Gilbert Maebe!
- Hospitality Suite!
- Conference Packet (with FREE goodies!)

Hotel Reservations -the Clarion Hotel, San Francisco Airport

We have the following discounted room rates available until August 29th:

Single occupancy \$99 per night

Double occupancy \$119 per night

Make your reservations early, because September is a busy tourist and conference season in San Francisco! Call 800-223-7111 or 415-692-6363 to make reservations. Mention rainbowfish to get the discounted room rate.

Discount Pre-Registration Form -----X-----X-----

Mail to: Kim Goodwin, 485 Wesley Ave. #1, Oakland, CA 94606 by July 1.
Make checks payable to SFAS.

Name(s):	
Address:	
Phone #	

Package	Price/Person	Quantity	Subtotal
Conference & Banquet	\$45		
Conference ONLY (does not include banquet)	\$20		
SFAS Members* Discount	\$5 off		
Total Amount Enclosed			\$

*You must be an SFAS member at the time of registration AND at the time of the conference.

- How many vegetarian meals will you need at the banquet? _____
- Will you be staying at the Clarion Hotel? ☐ Yes ☐ No
- Do you think you might bring items to sell at the Fish and Plant Auction? ☐ Yes ☐ No
If yes, please note your best guess at species and quantity on the back of the form. This will help us to plan the auction and ensure a variety of species available for sale.

Tentative Schedule Rainbowfish '97

Friday, September 19th

Afternoon	to be determined
~7:00 pm	Get Together
8:25	Welcome from SFAS rep and Gary Lange
8:30-9:00	Neil Armstrong- The Beauty of Rainbowfishes

Saturday, September 20th

9:00 am	Opening remarks, official opening of Convention
9:10-9:40	Bruce Hansen – Blue Eyes
9:40-10:05	Q & A / break
10:10-10:30	Cary Hostrawser - Species Maintenance
10:30-10:40	Q & A
10:45-12:00	Jerry Allen - Irian Jaya Rainbows and the Freeport Connection
12:00-1:00	Lunch – a local on-site deli will provide a quick way to get lunch and then back to the Rainbows
1:00-2:00	Jerry Allen - Lake kamu-Lost Wilderness of Papua New Guinea
2:00-2:25	Q & A / break
2:30-3:30	Gilbert Maebe – Pajinka – Cape York
3:30-3:55	Q & A / break
4:00-5:00	Neil Armstrong -Arnhemland
6:30/7:00 ?	Banquet - Jerry Allen, Gilbert Maebe "Sahul Symphony"

Sunday, September 21st

9:30-10:30 am	Gilbert Maebe - History of Rainbowfishes
? 11:00-11:30	Viewing (time still to be determined)
Noon to ?	HUGE Auction of Rainbows, dry-goods and others (time still to be determined)

Useful #'s E-mails most likely will get a quicker response

Gary Lange	(314) 837-6181 6:30 pm-10 pm weekdays, most weekends E-mail: gwlange@STLNET.com
Kim Goodwin	(510) 839-5681 Pacific Coast time E-mail: fishgirl@ix.netcom.com
SFAS website	http://www.sfaquarium.org/
RSG website	http://home.stlnet.com/~gwlange/rainbowfish.index.html

Species Maintenance Report - The Breeders' Circle

by Cary Hostrawser

Well we've had a bit of response for my request to form breeders groups. Not near as much as I hoped, but it gives ups a jumping off point. Whenever you lament the lack of availability or quality of rainbows, remember this is what we're trying to address with this program.

At present we'll start with the species people have volunteered to participate with and attempt to expand from there. So if you're willing to participate on a listed species contact one of the people who's already working with that species or myself, even if you don't have that species yet. This is a program to spread these fish out and protect them in the hobby. If you have another species you would like to get into the program, then contact me and we'll get it listed. This is a program for members, made up of our members and controlled by our members. Many of these members are willing to give eggs or young fish to people willing to participate. Others are looking for fish to start up a Breeder's Group. I've put a "-" sign behind those names. After looking at this list, you'll find that many fish are listed with only one person willing to participate. This is why we loose fish. If only one person is keeping a fish and they make a mistake, then often we no longer have that fish in the hobby or we're stuck with degraded pet trade stock. Let's work together to keep this from happening!!!

<u>Species</u>	<u>Breeder Group Participants</u>		
<i>C. bleheri</i>	Gary Lange	Kim Goodwin	Kevin Hosmer
<i>C. eremius</i>	Cary Hostrawser		
Hergott Bore			
<i>C. sentaniensis</i>	Gary Lange		
<i>G. incisus</i>	Julie Zeppieri		
<i>G. maculosus</i>	Robert Lumahan-		
<i>G. ramuensis</i>	Julie Zeppieri		
<i>G. wanamensis</i>	Kevin Hosmer	Julie Zeppieri	Robert Lumahan
<i>M. affinis</i>	Gary Lange		
Bluewater Creek			
<i>M. affinis</i>	Gary Lange	Cary Hostrawser	
Lake Emas			
<i>M. arfakensis</i>	Gary Lange	Cary Hostrawser	
<i>M. boesemani</i>	Kim Goodwin		
? strain			
<i>M. boesemani</i>	Gary Lange		
Ekk-Will strain			
<i>M. duboulayi</i>	Jack Betz		
Kangaroo Creek			
<i>M. goldiei</i>	Gary Lange		
<i>M. herbertaxelrodi</i>	Kim Goodwin		
<i>M. irianjaya</i>	Gary Lange		
<i>M. lacustris</i>	Gary Lange	Cary Hostrawser	Kim Goodwin
<i>M. parkinsoni</i>	Gary Lange		
<i>M. praecox</i>	David Brown		

<i>M. sexlineata</i>	Robert Lumahan-		
<i>M. trifasciata</i> Canoe Creek	Gary Lange		
<i>M. trifasciata</i> Giddy River	Jack Betz		
<i>M. trifasciata</i> Goyder River	Kim Goodwin		
<i>M. trifasciata</i> Skull Creek	Jack Betz		
<i>M. trifasciata</i> Upper Coen River	Gary Lange	Cary Hostrawser	Kim Goodwin
<i>M. trifasciata</i> Wonga Creek	Gary Lange		
<i>Mogurnda mogurnda</i>	Cary Hostrawser		
<i>Mogurnda pulchra</i>	Cary Hostrawser		
<i>P. connieae</i>	Robert Lumahan-		
<i>P. furcatus</i>	Cary Hostrawser		
<i>P. gertrudae</i> Giddy River	Kevin Hosmer		
<i>P. mellis</i>	Kim Goodwin		
<i>P. paskai</i>	Cary Hostrawser		

Further musings (from this obvious madman to take on this task). Jack Betz mentioned having some *M. duboulayi* Kangaroo Creek available for some one willing to join the program. Another topic is for participants in the program. If you're not sure of your stock do not put them in the program. Get some stock from another participant with confirmed pure stock. If need be I'll put out a call through this column for pure stock. Let's make sure we don't add to the problem in our wishes to do good.

Kent Webster (310) 831-5695
6 Coach Road
Rancho Palos Verdes, CA 90275

Available

Madagascar *Bedotia geayi*, *P. gertrudae*, *G. incisus* (Blushing Red), *G. wanamensis*, *M. boesemani*, *M. affinis* (North New Guinea Blue), *M. affinis* (Emas Lake New Guinea but called Pagwi: orange, blue, yellow strip), *M. goldei*, *M. s. fluviatilis*, *M. trifasciata* (Goyder River), *M. maccullochi* (red fin), *M. parkinsoni*, *M. praecox*, *M. lacustris*, *M. herbertaxelrodi*, *M. papuae*, *M. pygmaea*, *C. fasciata*, *C. sentaniensis*, *Telmatherina bonti*

Most species ship via mops. \$20+ shipping: \$3 in summer, \$18 in winter. For full list of fish available (including other species) please telephone, send SASE or E-mail at THEKENT@AOL.COM.

12/20/96

What to Feed Bow Fry

by Gary Gray

Living in Northern Ontario, with the winter weather starting in November and ending in late April, summer only offers a very limited time to harvest outdoor food supplies. Thus I must depend upon local pet stores as a source for food supplies to feed my Bows. Although they offer a wide variety of food, there is little offered to feed fry, especially the small Bow fry. So I was placed into a situation that if I wanted to raise Bow fry I would have to find an adequate food source.

The problem lay not on what to feed them, but how to get the food tiny enough so that the fry could eat it. What could I use to grind the food into bite size for the fry? Pondering this query, my mind took me back to my younger days when I was employed at a mine during summers. This mine used long cylinder shaped steel rods to grind the ore small enough to be processed. By using a cylinder shaped plastic container with a radius of one inch and height of three inches and a small cylinder shaped piece of polished steel I could grind the food into any size I desired.

I use a mixture of food - but each type must be ground separately to the desired size, then mixed. I use one part fish flakes, one part freeze dried brine shrimp, one part spirulina flakes, two parts freeze dried red grubs and two parts freeze dried zoo plankton (*Euphasia pacifica*). I found that a mixture of the zoo plankton and red grubs (1:1 ratio) ground into a very fine dust to be an excellent food source for feeding small Bow fry like those of *M. praecox*.

If you are fortunate enough to be able to buy freeze dried zoo plankton then do so for it is a must for feeding Bow fry from their smallest size to one inch. Make certain that it is freeze dried zoo plankton and not plankton flakes. Plankton flakes are made of krill which the Bows will not eat. I was purchasing Nutra Fin Freeze Dried Zoo Plankton but it is no longer available. Nor is any other name brand available in my area.

Also, freeze dried red grubs fed to adult Bows is great to get them into spawning condition. It may not be as great as mosquito larvae but it's the next best thing.

Ed Note: Can anyone offer an alternative source of freeze dried zoo plankton flakes?

Temperature and Sex Ratios

summarized by Barry Meiklejohn

The following article summarizes discussions that recently took place on the Rainbowfish Mailing List. This list is a free service on the internet organized by Andrew Boyd and Alan Ford. For more information:

<http://www.pcug.org.au/~andrew/rml.htm>

Gary Lange (RSG)

In July I was lucky enough to attend a lecture in San Francisco by Uwe Romer - a German scientist who specializes in dwarf apistos. His experiments pretty well proved that temperature plays an incredible part in sex determinations in dwarf apistos (and some West African dwarfs). I came away from that lecture remembering 3 numbers: 23°, 26° and 29°C. 23°C (~74°F) produced mainly females, 26°C (~79°F) equal mixtures, 29°C (~84°F) mainly males.

The cichlid folks had for years assumed that the most important factor was pH. Dr. Romer also showed that this temperature was important from time of birth up to some 33 days of age. So during the first 33 days proper temperature was critical if you wanted to obtain an equal number of males and females. After that timepoint it didn't seem to matter. A question was asked whether this also occurred for other African cichlids. Although not as carefully proven as his apisto data he stated that it did not seem to be a factor for many of the rift lake cichlids.

Cary Hostrawser (RSG)

I've been thinking about this temperature observation with lower temperatures generating more females and warmer temperatures more males. I have noticed that in many species the females seem to lag behind the males growth rate. This could be nature's way of evening out the odds between faster male growth and slower female growth.

I'm wondering if you folks that get the chance to collect these fish in the wild, notice that the males are much larger than the females in the wild or are the males and females in a school pretty much the same size? If the growth rates do differ in the wild and the resultant schools of rainbows are closely matched in size, this could be an indicator that some factor is correcting for a difference in growth rate. This assumption would also have to be based on a period of the year when fry survival is optimized and a majority of the year when very few fry survive. Again

this is something that hopefully you folks that get out and collect could answer. Is there a time of year when no or very few fry are found?

I guess where I'm trying to go with this is, nature rarely develops a trait that isn't somehow directed towards survival. It could be both pH and temperature effect fry ratios for similar reasons and mark the changes of season. I've really never seen any information on the seasonal changes in fish populations and water chemistry. It seems most species are often collected either very rarely and always in the same season when its easiest to get to them. If the water conditions were tested on the collection date, do we really know what variations are going on through the whole season? If there is some data on this, it could help to explain why nature may have developed a temperature or pH advantage to the sexes.

Harro Hieronimus (IRG)

Too true, Cary, we have too less knowledge on natural conditions over the year. However, at least from the Alligator Rivers I know an excellent study.

However, what we forget is that there are two types of rainbows: one with changing conditions during the year and one with rather permanently the same ones throughout the year (as far as we know, see above). To my personal opinion the rainbows with changing conditions can't be really changing their sex with the temperature while this might cause problems throughout certain times of the year.

Some people breeding *herbertaxelrodi* found that this fish would bring nearly only males bred at higher temperatures. Their natural habitat has 22°C with only minor changes as it's nearly at the equator. But that's just a hypothesis.

Bruce Hansen (ANGFA)

Perhaps the Rift Lake Cichlids don't need to have evolved this particular capacity as their environment is so stable all round. Since Harro has some livebearer evidence and dwarf Cichlids show it too, I don't see why Rainbowfish should be exempt. It is something we should keep in mind. Perhaps lake dwellers are more dependent on pH and riverine species are more affected by temperature?

A Primer on Breeding Rainbowfish

by Cary Hostrawser

With an ever increasing interest in the beauty of rainbowfish, many people are beginning to turn their thoughts to breeding these fish. This article will present the basics of breeding them with the focus on the genus *Melanotaenia*. This genus contains some of the most popular and obtainable rainbowfish, such as *M. boesemani* (Boeseman's Rainbow), *M. lacustris* (Turquoise Rainbow) and *M. trifasciata* Goyder River (Goyder River Rainbow). One good beginner's rainbow is *M. boesemani*. A full grown adult pair's fry, typically will not need to start feeding on micro-food, such as APR or greenwater.

Of course, conditioning is a good first step to breeding any fish and will definitely assist in breeding rainbows. But often rainbows will breed just because the sun came up. A good high protein diet mixed with vegetable matter will help the female to produce more eggs and keep the male at maximum fertility. Also, keep up with your water changes and control your water conditions.

I mention the water conditions because you will need to do a little research. Many rainbows will produce a male to female ratio based on the pH of your water. So, if you don't want to end up with mostly one sex, find out what pH your species of rainbow desires and keep it in that range while spawning and raising the fry. On the other hand, if you want more males, keep your pH low. If you want more females, keep your pH high. If it turns out the opposite happens, then please write an article on it because you may have just discovered a reverse sex determined species. There is a bit of discussion of when the sex of rainbowfish is determined. Some people believe it's at spawning, others during egg development and still others believe it occurs much later.

Now that I've got you worried about pH, and you're about ready to swear off these temperamental and fussy fish, let me give you the good news. Most rainbows will tolerate an extremely wide range of pH and hardness. Not just tolerate, but thrive. Many rainbows come from streams that have wildly changing water conditions. In the dry season, these fish can be trapped in little pools and have to survive some horrendous conditions. One rainbow, *Melanotaenia splendida tatei*, actually lives in the deserts of Australia. When the rains come, these hardy fish swim out of their food and oxygen depleted pools and actually swim across land looking to find new waterways. This has led to local legends of storms so strong that it rains fish in Australia, because fish show up miles from any open water supply during the infrequent rains.

OOPS! I'm wandering off topic, so back to breeding rainbows. Place a spawning mop in the tank with the parents. Set the temperature to 74-78 °F. In

the morning (some males all the time) the male will hang out near the mop and try to entice the females to join him. This is when the male will flash his colors. You have to see this to know what I mean, but some rainbows can change so radically you'll think somebody slipped something in your morning coffee. I'm not talking about the typical spawning colors of many tropical fish. I'm talking colors that turn on and off like a blinking neon sign. They usually spawn every morning when they get in the mood, so make sure you get up when the sun rises on occasion to watch this. When a male entices his love interest into the mop, he joins her and side by side there is a quick and intense flurry of activity and its over. Just goes to show that even in the world of rainbowfish most of love is the chase and prelude to the actual event.

A follow up inspection of the spawning mop will reveal between 2 to 30 clear or yellowish eggs. These eggs are adhesive and will stick to the mop. When you make a spawning mop use about 50 to 60 wraps of acrylic yarn. A thick mop will keep the parents from feeding on the eggs. Some bows like to spawn high in a mop and others at the bottom so I like to make the mops long enough to float on the top and still reach the bottom.

Check the mop every evening to see if you're getting eggs. It's best not to have any other fish in the tank or they will find the free meal and learn a fresh batch of caviar awaits them daily. After a week or two of daily spawning, you will see the eggs eyed up. That's the term for very developed eggs getting ready to hatch. The formerly clear egg now has a distinct black center. Move the mop to the hatching tank at this point.

Never harvest eggs or fry from a tank with multiple species of rainbows. Rainbowfish have been proven to cross breed between species and between genus. When you spawn rainbowfish you must isolate the adults to their own tank. I cannot stress this fact enough. Also with the many different subspecies and varieties, great care must be taken keep track of exactly which rainbow you have. For some rainbows this means keeping track of genus, species, subspecies and collection location. Science is constantly updating the taxonomy of the rainbow species, and without saving that information you could end up with a rainbow with no identification.

The fry tank should preferably be a sterilized bare tank with low aeration and a sponge filter. The reason for low aeration is that rainbow fry are very small and stay at the water surface. Heavy aeration will easily wear out these little critters and lead to death. The temperature on the hatching tank should be about 76 - 78 °F. Keep an eye to the water surface of the tank. The hatching fry will immediately swim to the top and stay there. Depending on the species these fry may appear as nothing more than tiny slivers.

When the fry begin hatching, turn the temperature up to 82 - 86 °F and begin feeding micro-foods immediately. This will encourage faster growth to get the fry out of the micro-food stage. As noted earlier the fry do not have a yolk sac and need food soon after hatching or they will perish. One bit of help in this regard is it doesn't take much in the way food to keep them fed so they can find things to eat that we can't even see. Excess food can easily spoil, fouling the water and killing off all the fry. So I like to add some snails to eat the extra food after the eggs have hatched.

You can use many different types of micro-food. By far the best is green water. It doesn't rot and is always available when added to a tank. If you use green water, be very careful how you add it to the tank. Rainbow fry are very sensitive to water changes and a sudden influx of different water can wipe them out fast. I tried a slow drip method once and before I realized I had wiped out a whole tank of fry. The green water was soft and acidic, while the tank water was hard and alkaline. It seems the fry swam under the airline tubing I was using to drip the water in. Every time a drip came down when fry were swimming by, the change in pH killed the fry. Now I've learned to put the drip line on the bottom of the tank where the fry don't go. Some prepared micro-foods are APR by OSI (my main stand by), Liquifry, Tetra E and a host of others. Just remember, with prepared foods its best to feed very little very often.

As soon as the fry are large enough, start feeding them baby brine shrimp. Some rainbow fry can do this from the start. *M. boesemani* is one common rainbow that doesn't typically need micro-food to start. How long they need to be on micro-food varies from a few days to a couple of weeks. Turning the temperature up helps them to grow faster and get on to larger foods quicker.

Rainbowfish fry are very sensitive to water changes. Wait until the fry are no longer swimming on the water surface and have put on a little size. When you do change water, make sure the replacement water is the same pH and hardness and to add the water very slowly. For the first water changes I trickle the water into the tank using air line tubing and valve to slowly siphon the water to the bottom of the tank. I take about an hour to add the water this way. Usually when they start swimming at all tank levels you can start water changes, but go slowly at first. By the time the fry are about a half inch their sensitivity to water changes is over.

The mentioned temperature changes are optimal. In the wild the adults hang out in the cooler mid-stream areas and move to the warmer plant filled areas to spawn. The hatched fry move to even shallower, warmer water. As the fry grow they start moving back towards the cooler middle waters of the stream. Following this pattern is not always required but leads to greater success in raising rainbow fry.

If you find you're beginning to really like rainbowfish you should consider joining the Rainbow Study Group. Membership is \$10.00 a year and the quarterly publication "Rainbow Times" has a fish and egg listing of rainbowfish you will never see in any pet store or at most fish clubs around the country. We also have a 10 year compilation magazine that has more information on keeping rainbows in the aquarium than you will find in any book.

MAKE CHECKS PAYABLE TO: RAINBOWFISH STUDY GROUP

c/o Sherry Taylor
171 Campbell Lane
Cookeville, TN 38501

Ed. Note: Having already contacted the author and requested his permission, I would like to suggest RSG members consider photocopying this article and placing copies in their local fish stores - with the store owner's approval.

Steven Polk
1790 27th Avenue #203
San Francisco, CA 94122

(415) 665-FISH
before 10 a.m. Pacific time ONLY!

Eggs Available

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Fish Available

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R. ornatus (Red Form), *G. maculosus*, *C. fasciata* (Red & Black) Will trade *P. paskai* for wants.

Mops \$15 to \$20 plus shipping. Prefer to trade for other fish and eggs. Need not be rainbows.

3/21/97

Welcome New RSG Members

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205-424-3474

Uncle Ned's Fish Factory / Ned Bowers, 1590 Main Street, Route 109, Millis, MA, 02054
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Brampton Aq. Soc. / Mike Buckle, 106 Trewartha Cres., Brampton, Ontario, L6Z 1X4, Canada,
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Yoshishige, David H., 2126 Hoohai Street, Pearl City, HI, 96782-1754, 808-455-8839

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.

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