



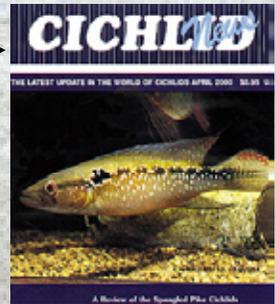
Showfish *coast*

PROVIDING EDUCATION AND CAMERADERIE TO PEOPLE WHO ARE INTERESTED IN KEEPING TROPICAL AND TEMPERATE FISH AND OTHER AQUATIC LIFE

DECEMBER 2008
VOLUME 17 ISSUE 12

December 7 **Holiday Potluck Meeting**, 1 to 5 p.m. Featuring **Vin Kutty**. Topic: **Pike Cichlids**

Photographer, chemist, world traveler, fish collector, author, } Bolivian land baron (okay, okay—small-chunk-of-undeveloped-land-that's hard-to-get-to-that-he-found-on-a-fish-collecting-trip baron) and obsessed fan of pike cichlids. That's our own Vinny Kutty, member of COAST for more than ten years.



In addition to being properly interested in fish and their habitats, Vinny displays two other vital character traits of a successful hobbyist:

- He can get himself invited to the biggest dinner of the year—it's the **Holiday Roast Turkey and Potluck (You Bring It We'll Eat It) Dinner Buffet.**

- He can have a good time while his feet are wet.

(Background photo: Vin trying to collect pikes in French Guyana in the rain.)



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Tetra

PROVIDING EDUCATION AND CAMARADERIE TO PEOPLE WHO ARE INTERESTED IN KEEPING TROPICAL AND TEMPERATE FISH AND OTHER AQUATIC LIFE

The Showfish is the newsletter of California's Organization of Aquatic Show Tropicals (COAST), a 501(c)(7) not for-profit association registered in California. It is published six to twelve times a year and is a benefit of membership in COAST. The information and opinions expressed in articles are those of the author and may not reflect those held by COAST or other COAST members.

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Exchange Policy: COAST will exchange newsletters which contain information about fish and the fish hobby with other fish clubs. Please notify the Showfish Editor, C.A. Marelius, if your club would like to participate in an exchange program.

Driving Plasmodium falciparum to impotence?

from the article "Knocking Out Malaria", by Tim Fulmer, published in SciBX, online, September 18, 2008

Plasmodium falciparum is one of the microscopic parasites that causes malaria in humans; this species is from the eastern hemisphere. In the past and today, the attack on malaria focuses on eliminating the mosquito vector and on treating infected people with parasite-unfriendly drugs. Neutralizing the parasites is more important and urgent than ever, as both African and Amazonian species are increasingly resistant to the drugs used to treat the host.

At every point in its life cycle, Plasmodium falciparum is still thriving. Mosquito mummies are infected with malaria gametocytes upon consuming the blood of infected mammals. The gametocytes develop into sporozoites once inside the mosquito gut and then migrate into their mammalian host when the mosquito eats. The sporozoites lodge in the liver until they have grown into merozoites, which in turn leave the liver to invade red blood cells. Once inside red blood cells, the merozoites produce more merozoites and gametocytes, thereby rupturing one cell after another. The gametocytes eventually end up being mosquito dinner and starting the life cycle again.

The complex life cycle of *P. falciparum* presents both opportunities for and challenges to developing successful weapons against malaria. Three life stages, three habitats, two host types, and one method of

transmission: just count the opportunities! Fame and fortune await the scientists and drug company that can kill *P. falciparum*. With three life stages, three habitats, two host types, and one method of transmission, however, it is unlikely any one agent by itself will be successful at eradicating *falciparum*. It is far more likely that a combination of agents will be required, which somewhat complicates the business case for working on anti-malarial agents.

Nonetheless, scientists and companies ARE looking for solutions. The Bill and Melinda Gates Foundation's Global Health branch is actively soliciting ideas—from any scientific or technological discipline—on new ways to attack malaria. Small grants are being given to several scientists who propose novel possible solutions, with significant follow-on grants to be awarded to those initial grantees whose proposals show cause for further development (from the Gates Foundation website). The not-for-profit Swedish company, Medicines for Malaria Venture, supports public-private partnerships in malaria research. (All biopharmaceutical companies in Sweden are not-for-profit; it is a requirement of their national health care system. Info from PBS program aired in the fall of 2009 regarding health care systems around the world).

On the more traditional front, biological scientists are orienting on vaccines as way to defeat *falciparum*. Since each of the three stages in the parasite's life cycle has unique antigenic proteins, each stage offers individual opportunities for vaccines (called subunit vaccines).- A vaccine against sporozoites could prevent an infection from developing merozoites. A vaccine against merozoites would limit the severity of blood cell damage, which is the stage where people first show symptoms of the disease. A vaccine against gametocytes could prevent zygote formation in the mosquito's gut. Scientists are also working on whole-organism vaccine strategies, such as developing a genetically altered, that is, "attenuated", *falciparum* strains.

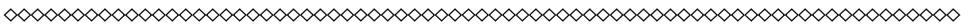
One tactic being considered is disabling *falciparum*'s production of an enzyme that helps the parasite recycle and salvage purine molecules. *Falciparum* cannot create purine within itself yet requires it for DNA and RNA synthesis. Without the enzyme, the parasite's viability is impaired. Studies of the mouse malaria parasite species, *Plasmo*

dium yoelii, showed parasites which could not produce the enzyme had impaired development in the mosquito, and, in the mammalian host, a lower rate of blood-stage growth, a decrease in the number of infected blood cells, and an increase in the number of surviving mice. Surviving mice proved the immunity they had gained from fighting off attenuated *P. yoelii* protected them completely from blood cells infected by wild *P. yoelii*.

One modified strain of falciparum is being worked by a group at Albert Einstein College of Medicine and New York University School of Medicine. Viable malaria in the merozoites stage occurred in only 20% of the mouse models, but for human use, that rate has to be less than 0.1%, so they have quite a way to go yet before product is ready.

GlaxoSmithKline is developing a subunit vaccine, RTS,S/AS02, which targets the sporozoites in the liver. It is currently in Phase II testing, and trials in sub-Saharan Africa have shown the vaccine to be safe and effective on adults and children. Sanaria, Inc., is using radiation to develop a sporozoite vaccine that prevents the sporozoites from replicating and infecting blood cells; they are planning a U.S. trial in the near future. Seattle Biomedical Research Institute plans to send a genetically modified sporozoite vaccine to trial early in 2009.

Even though the current generations cannot go traipsing about the tropics free from the danger of malaria, netting interesting fish, it looks like our children or grandchildren will be safe from it.



HOLIDAY POT LUCK BUFFET AND FISH GAME!

The ***club buys the turkey***, this year cooked by Tony Mazeroll, we all ***bring side dishes, drinks and desserts***, we ***eat*** as much as we can, and then we ***listen to Vinny!***

FISH EXCHANGE GAME: Bring ***one fish or fish-related*** item all wrapped up, and ***play a round-robin exchange*** game to see what you finally get (have) to take home.

Hi, ASA Graphic Designers, Copy Writers and Layout Artists. I hate to see wasted space on any publication; so, I thought it would be appropriate to make some suggestions for the coming year:

- Provide articles for our Editor
- Monthly membership profiles
- Local field trips to members' fish rooms
- Organize a local fish show; i.e. coast live beaver show; coast cichlids show

Please send your comments to the Editor.

Mike Khalid

Membership Status

New and Renewing

Welcome and Thank You!

428 Victor Bonjar
385 Tien-Yeo Hsu
430 Roger Ledina
281 Anthony Mazeroll
16 Mike, Elaine Mc Cabe
424 Larry Mc Cullah
429 Chris Page
71 Kathleen Van Dam

Due in December

46 Alan Rosen
3 Marc, Barbara Allen

Past Due (November)

296 Charles Clifford
390 Mike Ganotisi
389 Raul Giles Rodas

Expired Memberships

387 Dick Au
364 Perry Ciampaglia
113 Ron Hongo
363 Victoria Kuhl
237 Ron, Mamie Nash
386 Sandeep Sasi
388 Jeff Sevening

Coming Due in January

284 Sandy Binder
395 Rick Handfield
288 Richard Lin
47 Stan Sung

Erratum:

Anthony Mazeroll is our vice president for 2009, not Kirk Bean, as was listed in the November newsletter. I apologize for the error.

C. Marelius

Phone 951-490-4894



Time and place we meet:

Time: the first Sunday of every month from 1:00 to 5:00 p.m.

MEETING AGENDUM:

12:30 Board Meeting
1:00 General mtg, announcements
1:30 Presentation begins
2:45 Auction begins
4:15-4:30 Auction check-out begins
5:00-5:30 Vacate the room

Place we meet:

We meet in the Costa Mesa Neighborhood Community Center in the Victoria Room (usually) or the Harper Room. The Center is a brown brick building between a fire station and Lion's Park. Closest major intersection is 19th and Harbor Blvd.

Costa Mesa Neighborhood Community Center
1845 Park Avenue
Costa Mesa, CA

Discussion Group: <http://pets.groups.yahoo.com/group/coast-fishclub/>

Website: <http://www.coastfishclub.com>

Newsletter: The club's newsletter, the Showfish, is published at least six times a year (usually 10 to 12) and mailed to arrive a day or two before the meeting. The current issue is published on our discussion group in the "Files" section around the 25th of the month, and previous months' Showfish are published on our website.

Meeting dates for 2008

All meetings will be in the Victoria Room unless otherwise noted.
December 7

MEMBERSHIP APPLICATION **COAST MEMBERSHIP APPLICATION FORM**

MEMBERSHIP RENEWAL

Mail to: **Jim Herman, COAST Treasurer**

GUEST Registry / AUCTION Sign-In

1317 Bradley Court, Glendora, CA 91740

(Received by _____ Date Rcvd _____ Payment \$ _____ Member No. _____)

Yes! I want to be a member or guest of COAST. Enclosed/attached is my check or money order made **payable to COAST in the amount of \$20** for a one year membership as an individual or family (within the same household please). Senior citizen (aged 62 or over) or junior (aged 20 or under) memberships are \$15 for one year. Members receive Show-fish (ten to twelve issues a year), which contains information of interest to hobbyists. Meetings have programs specific to the hobby, and you are eligible to participate in our monthly auctions and raffles. Why wait any longer?

Name _____ Email _____

Address _____ Phone _____

City _____ State _____ Zip Code _____

Thank you for your membership and registration. Please tell us how you heard about COAST:

Member Magazine Fish Store Website Showfish Referred by _____

What fish do keep / want to keep? _____

What contact information would you like to list in the Membership Roster? (Membership Rosters are COAST property and distributed only within the club to encourage fellowship among members.)

Publish full contact info (default) Do not publish street address Do not publish phone Do not publish email
Unless otherwise specified, the full membership listing of member no., name, phone number, address, city, state and zip code will be listed in our membership directory. Please be sure to notify us of any changes in your contact information, either by email or by using this form.

Please fill it out completely when you're renewing, too. That's how we keep the membership list correct and up to date.

COAST is a 501(c)(7) Not-For-Profit Association

**CALIFORNIA'S ORGANIZATION
OF AQUATIC SHOW TROPICALS**

<http://www.coastfishclub.com>

c/o C. A. Marelius, Showfish Editor

16229 Armstead Street

Granada Hills, CA 91344-3009

MEETING DECEMBER 7th, 2008

1:00 to 5:00 p.m.

Costa Mesa Neighborhood Community Center

Victoria Room

1845 Park Avenue

Costa Mesa, CA

***Largest Tropical Fish, Plants & Accessories
Auction in California. Guests Welcomed.***