

Ocean Currents

ERIC BORNEMAN TO TALK! DON'T MISS IT!

SUNDAY, Sunday, SUNDAY!!

November 17 is the date to remember, 12:30 the time.

Eric Borneman, premiere coral expert, will be coming to Chicago to give us a talk on *Coral Nutrition: Polyps, Not Plants*.

So our regular 1:00pm Saturday meeting will instead be on Sunday, at 12:30, in the Schaumburg Library's Adult Classroom.

Eric is the author, most recently, of *Aquarium Corals: Selection, Husbandry, and Natural History*, as well as countless articles in various hobby magazines. He also has taught classes online through reefs.org, and been a speaker at many conferences.

Eric's talk will be free to members of CMAS and any other MASNA-affiliated club (bring your cards, please!), but we will ask for a \$5 donation to help defray costs.

Non-members may join at the door for \$15, or pay \$5 to enter.

The meeting will start off with a call for nominations for the club's officers and committee chairmen. (Elections will be held December 14th.)

Then we will hear from Eric. Don't miss this wonderful opportunity to hear him speak and ask him questions!

Past Events

September 21 **George Parsons**, senior aquarist at the Shedd Aquarium (the largest indoor aquarium in the world!), showed CMAS members around the inner workings of the Shedd's new Philippine Coral building, called "Wild Reef." About 30 people took advantage of this exciting tour. The underground addition should open to the public next Spring.

Then October 19th CMAS hosted a coral fragging workshop—always a popular event. President **Tom Sandercock** brought in three large corals from his tanks: a colt (*Alcyonium*), a bird's nest (*Seriatopora*), and a candy cane (*Caulastrea*). He and **Doug Lehman** demonstrated how to split the corals, and various methods of attaching them to rocks. Then



Welcome, New Members!

Since the last issue of *Ocean Currents*, we've had 12 new hobbyists join us, six at the Shedd, three before and 3 after. A big welcome to **Lee and Jonathan Craigmyle** of Big Rock, **David Carollo** of Elmhurst, **Mike Salyers** of Chicago, **Jim Pilon** of Chicago,

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viewers were invited to come up and cut and glue frags for themselves. And finally, the frags were sold for \$5 apiece. Can't beat that!

Peter Lambrinakus of Chicago, **John Mas** of Park Ridge, **Jeff Makowski** of Warrenville, **John Figiel** of Roselle, **Rob Milanovich** of Glendale Heights, **Andrea Pilipuf** of Island Lake, and **Earl Carpenter** of Barrington. We currently have 129 members! Thank you for joining CMAS, and please don't be shy—speak right up and tell us what you'd like to read about, hear about, talk about.

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CMAS Officers

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 Past President — Dennis Gallagher, 847-882-8594, dennis2103@attbi.com
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 Membership Chairman — Jim Bash, 773-235-2526, jbash@uic.edu
 Raffle Co-Chairmen — Joe Liontonia, 630-922-1426, tricrescent@aol.com, and Ed Bendickson, 630-653-2647, bdickson@interaccess.com
 Newsletter Editor & Webmanager — Marty Bash, 773-235-2526, MKSCom@concentric.net
 MASNA (Marine Aquarium Societies of North America) Delegate — John Brandt

CMAS Meetings

Unless otherwise noted, CMAS meetings are held at 1 p.m on the third Saturday of each month, September through May, in the Rasmussen Room on the second floor of the Schaumburg Public Library, which is located on the southwest corner of Schaumburg and Roselle Roads, in the Town Square Mall. Please be on time. Meetings usually run about 2½ hours. Non-members are invited to attend as guests.

Directions:

From the South: If you are travelling North on I-290 (IL Rte 53), exit at Higgins Road, travel West to Roselle Road, then South to Schaumburg Road.

From the North: Schaumburg Road is South of Golf Road and also South of the Northwest Tollway, I-90. If you are Westbound on the NW Toll, there is an exit for Roselle, Southbound.

From the East: You can take the Kennedy from Chicago, continue

on the NW Toll (I-90), exit at Roselle Rd and travel South to Schaumburg.

From the West: Take any good East-West road to Roselle. NOTE: South of Schaumburg, Roselle Rd is called Bloomingdale Rd.

Board Meetings

CMAS board meetings, although irregularly scheduled, are open to all interested members. Frequently they begin an hour before a meeting. Check with an officer.



HELP!

Sunday, November 17th, we will be taking nominations for CMAS board members and committee chairmen.

Please help us by offering to serve in some capacity or by nominating someone you think could help. Our club currently has 129 members, of whom an average of about 30 come to meetings, and of whom about half a dozen do the majority of the work of running it.

If you like our club, and enjoy its meetings, please consider contributing more than just \$15 a year. With so many members, we should be able to divide the workload so that no one has to spend great amounts of time on it.

We all have jobs and personal lives, so volunteer work comes last, but spreading the responsibilities out over several people, and rotating those positions with infusions of new people and new ideas, should not only keep our club going, but make it excel!

Elections will be held Saturday, December 14th.

**Visit CMAS
on the Web!
www.cmas.net**

Something to sell or trade?
Place a classified ad in
Tradewinds!

Free Subscriptions!

FREE?

Yup. The internet age now brings you two hobby magazines online, which you can read on the screen or print out if you prefer.

ReefCentral.net brings you *Reefkeeping*, and Reefs.org sponsors *The Advanced Aquarist*.

As a sample, the contents page of the latest *Reefkeeping* lists the following:

Feature: *Securing Propagated Corals: Methods of Fixing Live Coral to Hard Substrates*, by Anthony Calfo

Feature: *MACNA Mania*, by Kevin Kuykendall

ReefSlides: *Capnella Branchlet Dropping Sequence*, courtesy of Brad Bender

Tank of the Month: Chuck Fiterman's (MtnDewMan) beautiful 75-gallon reef

A Spineless Column: *Bitty Bugs: Copepods in the Reef Aquarium*, by Ronald L. Shimek, Ph.D.

Coralmania: *The Food of Reefs, Part 3: Phytoplankton*, by Eric Borneman

Fish Tales: *Let's Clown Around with More Gobies: The Gobiodon Species*, by Henry C. Schultz III

Notes from the Trenches: *Captive Rearing of Peppermint Shrimp (Lysmata wurdemanni): A Hobbyist's Tale*, by Frederick Scott Noack

And this month's *Advanced Aquarist* is featuring:

Editorial: *Struggling with Alveopora and Dendronepthea*, by Terry Siegel

Feature: *Spectral Analysis of Recent Metal Halide Lamps and Ballasts*, by Sanjay Joshi & Timothy Marks

Aquarium Fish: *The Crosshatch Triggerfish*, by Gregory Schiemer

Breeder's Net: *Ciliates*, by Martin Moe

Featured Aquarium: *The Penn State Aquarium*, by Sanjay Joshi

Photo Gallery Spotlight: *Schizostella bifurcata*, by Lisa Page

Aquarium Invertebrates: *A Review of the Corallimorpharia*, by Julian Sprung

Product Review: *The Aqualine 150 watt metal halide bulb + fixture, Part II*, by Richard Harker

Chemistry in the Aquarium: *Iron in the Reef Aquarium, Part II*, by Randy Holmes-Farley

Media Review: *References of interest in the literature*, by J. Charles Delbeek

Ever Been to a National Marine Conference? No?

Now's your chance. This May the International Marine Aquarium Conference will be held right here in Chicago. You can enjoy all the benefits of a big conference without leaving town.

National conferences are incredible experiences for the hobbyist—especially for novices. You can hear informative talks by the world's experts on fish, corals, tank chemistry, nutrition, etc. You can ask them for advice about your own tank. You can browse the booths of many exhibitors, often making great deals on products, and take chances on many raffle items. And best of all, unlike at out-of-state events, you can buy livestock and take it directly home!

The IMAC will be held May 2-4 at the Hyatt Regency Woodfield, across from the Woodfield Shopping Mall. The speakers

include Eric Borneman, Dr. Ron Shimek, Martin Moe (Plenary Session and Banquet Speaker), Dr. Bob Goemans, Julian Sprung, Dr. Rob Toonen, George Parsons, Paul Holthus, Mark Schick, Michael P. Janes, Randy Reed, Richard Harker, Larry Jackson, and our own Mike Kirda.

Admission is \$125 (through 2002), which includes program book, admission to all exhibits and talks, a Friday night reception and Saturday night banquet. Truly reasonable for the opportunity to hear so many speakers.

To register, visit www.theimac.org.

Organizer Dennis Gallagher says, "I think that the hobby is big enough now to sustain two major conferences, and of course it's great for the hobbyists!"

Future Meetings

December's meeting will be held a week early, on Saturday, December 14th, so all those who put off their holiday shopping until the last weekend will be able to attend. It will begin with Board Member and Committee Chair elections.

Then **Mike Kirda** will take us on a virtual tour of several hobbyists' tanks, by virtue of his magical photographic skills.

January 18th will be our first meeting of 2003, and will feature pictures and a talk by **Lynn Funkhouser**. If you attended last Spring's seminar you'll remember Lynn's beautiful pictures.

February 15th will be our ever-popular **swap meet**. Start fragging your corals now!

And **April 19th** The Puffer Queen, **Kelly Jedlicki**, will come talk to us about puffer fish!

Blood of Horseshoe Crabs Saves Lives

CHINCOTEAGUE ISLAND, VA—Every spring, when the tide is high and the moon is full, millions of ancient creatures crawl ponderously from the deep. They are horseshoe crabs, *Limulus polyphemus*, and they are the only remaining species of their class.

They blanket East Coast beaches with their pearly green eggs. Then they creep back to the waves.

The birds swoop down, swarms of them: red knots, sanderlings, ruddy turnstones, gorging themselves on eggs to fuel their journey north.

The commercial fishermen sweep in, cleaning the beaches of thousands of crabs in a few hours. Female crabs are particularly prized as bait. The tourists come with their cameras. The researchers come with their notepads.

Suddenly, a mating ritual that hasn't changed in 400 million years is being threatened.

And when the moon is full, between April and October, comes also Leon Rose, skipper of a 47-foot trawler, and the only person licensed by the states of Virginia and Maryland to catch horseshoe crabs.

He's been fishing the waters of the Delaware Bay most of his 57 years and knows exactly where to drop his massive, 70-foot nets: 1.5 miles off the shore of Ocean City, MD.

Thirty minutes later the deck is a glistening, writhing mass of claws, fins and feelers. Jellyfish and starfish, angel shark and conch. Ghostlike underbellies of skate.

And horseshoe crabs, mountains of them, all shades of gray and brown, like an army of miniature army tanks, clawing over each other, slithering in every direction

across the heaving boat. The bigger crabs are scooped into plastic crates. The young ones are flipped back into the ocean, along with the fish and invertebrates.

Fifteen years ago, horseshoe crabs were considered the trash of the ocean, dumped overboard with monkfish and other junk. Today, the ocean's trash has become its treasure, prized not just for its blood but also as bait for lucrative overseas conch and eel markets.

And in Delaware Bay, the world's prime spawning area, the crabs have become so hunted that states have imposed restrictions on the numbers that can be caught, and the federal government has proposed turning the bay into a preserve.

The difference between Rose and all the others is that he is the only one who returns his captives live to the ocean, 24 hours after their ordeal.

Every year he brings 100,000 crabs to the BioWhittaker lab, a small building on Chincoteague Island, which is more famous for its wild ponies than its crabs.

The strange, spiked creatures are pinned to plastic racks as lab technicians in white coats and face masks glide from row to row, rubbing them with alcohol as though soothing them for their ordeal.

The creatures flinch as long surgical needles are inserted into creases in their helmet-shaped shells. Blood spurts from their ventral sinuses into bottles beneath them.

Rich and blue (because it contains hemocyanin rather than hemoglobin), it is precious as gold. And every day it saves lives around the world.



—Courtesy The Assateague Naturalist

No other creature can produce this substance, the world's only known source of a compound used to test for contaminants in every drug and vaccine, every artificial limb and every intravenous drip in every hospital in America. Science can't make it, either.

Only the horseshoe crab, one of the oldest living animals, older than dinosaurs, so old it is dubbed a "living fossil," produces this magic. And only in recent decades have scientists begun to fathom its power.

The process is fast, and, say lab officials, painless. In a few minutes the creatures are drained of about one-third of their blood, tagged and tossed back into crates. Rose collects them that night and returns them to the deep. Most survive.

The sapphire-blue blood is then centrifuged to separate out the white cells, which are ruptured to release a protein—an amebocyte which functions in clotting—which is mixed with other ingredients and made into a freeze-dried powder called Limulus Amebocyte Lysate (LAL).

LAL was discovered in the early 1950s and became widely used by the 1970s. Before then, drugs were

tested for contaminants by injecting a sample into a rabbit. If the rabbit got a fever or died, the drug was discarded.

But since 1987 LAL has been the required FDA test for all drugs used by humans. The test is simple. The powdered LAL is rehydrated and a small sample of a new batch of drugs dropped into the solution. If the drug is contaminated, the mixture will clot instantly.

Science still hasn't figured out a way to make LAL synthetically, although the four U.S. companies that bleed horseshoe crabs are slugging it out to find the answer.

Horseshoe crabs are not really crabs at all, but more related to spiders and scorpions. They are so well adapted to their environment that they have not had to evolve for millions of years. Jan Nichols, a lab worker, says, "You look at these creatures and it's like going back in time. No other animal contributes so much to science, without dying in the process."

But biomedical companies, which use not only the crabs' blood but also their eyes for research on human eyes and the chitin from their shells for sutures, are worried, as are environmentalists, who say over-harvesting has endangered rare migratory shorebirds whose survival depends on a Delaware Bay stopover. Some fishermen say they have to travel farther to catch them, and some beaches are swept clean at spawning time. This last is particularly ominous, as the crabs take 10 years to reach sexual maturity.

On the other hand, fishing interests argue that the crabs are vital to the local bait business and that there are no indications of a serious decline.

As a start to quelling what is

probably overfishing, most Atlantic states have restricted by 25% the number of crabs that can be caught, and the National Marine Fisheries Service has declared a moratorium on commercial horseshoe crab fishing in Virginia, but overfishing in Japan, once another prime spawning area, has virtually wiped out the crabs there.

Let us hope that the argument between all the interested parties can be solved and the balance returned before this prehistoric lifesaver disappears from the Earth by dint of human greed.

—Adapted from an article by Helen O'Neill, Associated Press Writer, printed in the *Champaign News-Gazette*, September 15, 2000

Biology for Reef Aquarists

Ronald L. Shimek, Ph.D., known as "Dr. Ron" to many news group aficionados, will be giving a 15-week online class in Biology for Reef Aquarists starting 6 January, 2003.

The course cost is \$125 by check, or \$135 by PayPal (the extra to cover PayPal's transaction fees).

The registration deadline is 15 December, 2002. Contact Ron at rshimek@imt.net for payment instructions. If the minimum enrollment (30) is not met by that time, Ron will return any paid registration funds and the course will be cancelled.

The course level is first year college, more-or-less. Ron says, "I assume that you have no background in biology, but I am also going to assume that you are willing to do the work. I estimate that the average time expenditure will be about 10 hours per week."

Introduction: Coral reef aquaria

are probably the most complicated and difficult to understand artificial biological "constructions. The processes occurring in them are neither straight-forward nor even visible to the average aquarist. However, with a sufficient background in basic biology, the aquarist can anticipate and understand the changes occurring in their systems. In this course I will attempt to provide sufficient background utilizing: 1) the principles and information from a basic biology course, 2) examples from coral reef ecosystems, 3) coral reef aquarium organisms, and 4) coral reef aquaria to provide an understanding our captive ecosystems and what is happening in them.

Each week: There will be a reading assignment.

Additionally, I will post or email to the students one or more lecture-essays covering the week's topics. This will be from 5 to 30 pages of notes and information.

There will be a private course forum where questions will be answered on a daily (or more often) basis.

At the end of each week, I will distribute a quiz or test to allow the students to assess their progress. At the beginning of the following week I will distribute the answers.

Required Text: *Biology: Life on Earth* (6th Edition) by Teresa Audesirk, Gerald Audesirk, Bruce E. Byers. The text comes with a CD. Previous editions are not acceptable. Hardcover, 892 pages, Prentice Hall College Div; ISBN: 0130899410. Approximate cost: \$105.

Note: This is one of the most popular biology texts in the US. There is a good buy-back market, and used editions are available.

This means that you may be able to get good used copies at a significant savings off the retail price, and that you can recover some of the costs by selling the text back at the end of the course.

Course Outline: Each unit will be approximately two weeks long.

- I Introduction & Definition of Life
- II Necessary Chemistry & Chemical Processes
- III Cells & Cellular Processes
- IV Inheritance & Reproduction, Introduction to Genetics
- V Evolution – The Results of Genetics & Time
- VI Biodiversity
- VII Anatomy, Physiology & Basic “Biology” of Microbes, Fungi, Plants, & Animals
- VIII Ecology

Editor’s Note: I took an invertebrate biology course from Dr. Ron, and it was a wonderful experience. It takes work, especially for those of us who are out of the habit of studying, but is fascinating and truly worthwhile.

Pollution Imperils Florida’s Reefs

By John Christopher Fine

BOYNTON BEACH, FL – Forty-two madreporae corals were dead, counted during an hour-long dive 50 feet down in the Atlantic waters off Boynton Beach, FL. Others were half-dead, with stark white patches on otherwise healthy animals.

Coral reefs everywhere are in peril. Many reefs are dead, some are dying, and most are subjected to pollution. How that extermination process is taking place along the coast of America’s only continental reef structure, is a story of overpopulation, greed, and negligence.

Scientific base research of the reefs will take years, experts say. But

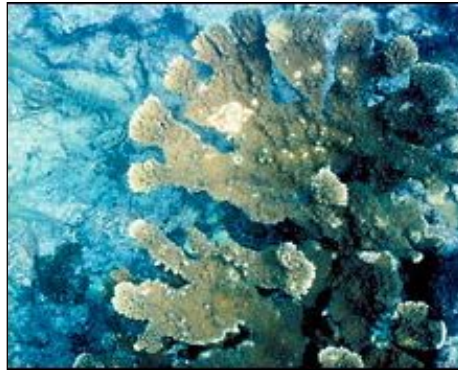


Photo by JAMES W. PORTER/AP

anecdotal evidence reported by concerned divers is urgently warning of the demise of America’s last frontier, Florida’s Atlantic coral reefs.

“The outflows were terrible all summer long,” Capt. Leo Sand says. Owner of the Deeper Dive Fleet, Captain Sand runs scuba charters and trips out of Boynton Beach. His dive boats are on the ocean every day. But recently his customers have reported visibility problems as the South Florida Water Management District opened the gates of its canals.

This allowed fresh water containing agricultural runoff and drainage, as well as sewage, to flow into Lake Worth and the Intracoastal Waterway. At tide change, the flow dumps directly into the ocean.

Sand says the release of water from the canals of Florida’s flood-control system is killing the coral. “We see it that same day as dirty, silty, particulate matter that settles on the reefs,” he says.

Corals are marine animals, not plants. Free swimming at the beginning of their lives, they eventually settle on some substrate, attach themselves, and begin a colony. Reefs not only prevent beach erosion but provide homes for many marine creatures in their nooks and crannies.

The reefs that corals build exist in

a complex cycle of life that requires clear, warm water. Tiny plants called zooanthellae live inside corals and produce oxygen and other nutrients while using the coral’s waste products.

Sewage, wastewater from storm drains, and agricultural runoff carried by canal water all contain high levels of nitrogen and phosphorus. These elements stimulate excessive algae growth.

The South Florida Water Management District recognizes the problem. “The alternative is flooding,” their managers say. “The system was designed to push water away, not to store it.”

None of this bodes well for Florida’s reefs. In 2001, Brian Lapointe, a research scientist at the Harbor Branch Research Institution at Fort Pierce, studied the effects of nitrogen pollution on the reefs from Deerfield Beach to Jupiter. Nitrogen levels registered highest off Boca Raton, where sewage is piped into the ocean. Dr. Lapointe’s studies revealed that algae now extend over large ocean areas from the Lake Worth Inlet to the Jupiter Inlet.

“Septic tanks are leaking, and sewage being pumped underground is feeding algal growth,” Lapointe says. He adds that seepage from these wells is also finding its way into the ocean.

Proposed long-term improvements would add billions of dollars in storage to prevent fresh water containing agricultural runoffs from being pumped into the ocean. In the near term, freshwater conservation and use of environmentally friendly detergents may help. Restricting population incursion into sensitive areas is another good idea, local experts say.

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CMAS Supporting Dealers

These Chicago area dealers support CMAS by displaying club literature in their stores, occasionally donating products for our raffles and giving members a 10-25% discount. Please patronize them.

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847-882-5747

Barrier Reef Aquatics (Mike)
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Beyond the Reef (Dan/Jeff)
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847-885-REEF

Birds & Beasts (Paul)
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815-477-7387

Capture the Sea (Jim)
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708-444-7614

Coral Reef Pet Center (Jim/Mitch)
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708-456-0768

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630-469-2114

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Living Sea Aquarium (Mike)
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847-698-SALT

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773-736-9838

Pet Food Warehouse
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847-705-7745

Pet Paradise (Sheila)
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630-960-0333

Pet Supplies "Plus" (Mike)
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630-801-4115

Petland (Adam)
342-120 W. Army Trail Rd., Bloomingdale
630-307-8887

Petland
720 S. Rte 59, Naperville 60565
630-357-3800

Reef Dweller (Menard)
6023 N. Lincoln Ave., Chicago 60659
773-743-5574

Scott's Pet Shop (Scott)
3054 S. Wolf Road, Westchester 60154
708-562-5000

Tropi-Quatics Pet Center
426 S. Main, Lombard 60148
630-953-2696

Tropical World Ltd. (Mark)
802 S. Buffalo Grove Road
Buffalo Grove 60089
847-541-1190

Wet Pets and Friends (Kevin/Sue)
160-D S. Roselle, Schaumburg 60193
847-891-5088

Classifieds

Have something you'd like to sell or swap? Contact Marty Bash at kscom@concentric.net to place a classified ad on our website, or visit it at www.cmas.net and link to our discussion board from the home page.

If you're not into computers, call Marty at 773-235-2526, and she'll put it online for you, and in the next issue of *ocean Currents*, with the phone number where folks can reach you.

Been on Vacation?

Seen any neat fish stores? Visited a great aquarium? Attended any other club's meeting? Read something fascinating or upsetting on the internet or in print? Share it with us! Contact the editor. Journalism degree not required!

For instance, **Jim & Marty Bash** spent 10 days on Kaua'i, Hawaii, last month, and had fun snorkeling and trying out snuba, among many other things. They might be persuaded to show their video of the snuba lesson.

CMAS Membership Application

Name _____

Address _____

City, State, Zip _____

Home Phone _____

Work Phone _____

Email _____

Give this to a friend!

Dues are \$15/year.
Mail this form with check to:
CMAS
c/o Jim Bash, Membership Chair
1825 W. Armitage Avenue
Chicago, IL 60622-1016

I am happy to download the newsletter from the CMAS website to save printing and postage.

Please put my name and e-mail address on the website list.

Odds and Ends

•The November issue of *National Geographic* has a fascinating article on a fish called a **Mola**, "a fish with a fore but no aft, like a gigantic swimming head."

•**Mike Kirda** will be presenting his Coralbase, and preliminary results from the light and chemical tests he is doing on those tanks he is photographing for it, at the IMAC conference here in Chicago. He has worked with the tanks of several CMAS members, but wants still more pictures. If you would be willing to let him take pictures of corals and other beings in your tank, please e-mail him at mkirda@attbi.com, or call him at 773-202-7955. It's truly amazing to see the the beautiful life he can spot and capture on film!

•**John Brandt**, MASNA's delegate to the Marine Aquarium Council, travelled to Puerto Rico in October for the next meeting of the U.S. Coral Reef Task Force. We hope to hear both a report of the latest legislation being developed to help save our reefs, and about the local diving.

•**Tom Sandercock**, our prez, went on **Lynn Funkhouser's** diving trip to the Philippines May 1. We hope to see his pictures soon. And come to think of it, we still haven't seen pictures of his trip to the Great Barrier Reef last September!

•**MACNA XV** will be held in Louisville, KY, next September.



The Chicagoland Marine Aquarium Society is a member of Marine Aquarium Societies of North America (MASNA).

•Would you like a **t-shirt or polo shirt** from Chicago's MACNA IX? Available at meetings, in L or XL. \$5 for t-shirts, \$10 for polos. Or call Marty at 773-235-2526.

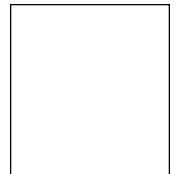
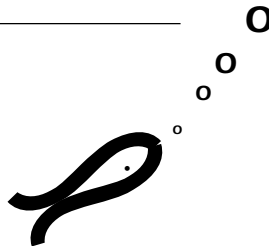
The Chicagoland Marine Aquarium Society, Inc., is a non-profit society of marine aquarium hobbyists brought together by the desire to promote a better understanding of the life we keep in our home aquariums. Our focus is increasing the longevity of marine life in a controlled environment, and in encouraging that life to propagate freely. Only through education and sharing of ideas can we expect a future for our hobby. Anyone interested in advancing these goals and in gaining a greater appreciation of this hobby is invited to join, regardless of level of experience.

CMAS is not a buying club and we support our local dealers.

Chicagoland Marine Aquarium Society, Inc.



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We're on the Web!
www.cmas.net

