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Membership: 31

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The Flipper

Official Newsletter of the Great Lakes Aquanauts

July 2006

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1. First of all, Happy 4th of July. I hope everyone had an enjoyable weekend.

2. July's meeting will be an important one as we discuss the future of our club. If you can attend, please do so. We need your input.

3. See an important letter from me later in this Flipper. Serious consideration must be given to our board and committee positions. Nominations will be accepted in October and elections will be held in November. It's your club ... it needs your support.

4. Our next scheduled dive(s) will be the weekend of August 4-6 in St. Ignace at Dave and Judy's. This is our annual Straits weekend. Please sign up at the club meeting on July 19 or contact Dave and Judy to RSVP. Bring a sleeping bag, towel, personal items, dive gear, etc. There will be a charge to dive, $50 per trip out to the dive sites. There will be a potluck dinner on Saturday night with the club providing the meat.

5. Jan and I (along with Jeff and Jan's aunt) will be returning to Cozumel in October (14-21, tentative). Several others have expressed an interest in returning with us. If you would like to join us, see the sign up sheet at the July general meeting.

6. Since we have changed the format for our dive schedule, if you want to do a dive on the weekend and want company, email the group (the list of names addresses is available when the Flipper is sent) and let us know your intent. Who knows, spontaneity may be the key!

SAFETY AND ED

DAN O_2 Courses
For the course nearest you, check out DAN's website: www. DanAlertNetwork.org. Look under "Training and Education".

OTHER DIVE RELATED INFO

Great Lakes Indepth
Watch Ric Mixter on public TV. Check your local listings for days and times. For more information, "dive" into the web at www.moreindepth.com" or write to Ric in care of:

ISE
2302 US Hwy 41 W
Marquette, MI 49855
906-228-7800.

FOR SALE

Call, fax or email Jan Ouellette to place your ad. This is a free service to GLA members.

- **Contour weights**, any size, call Mike Sitko.
- **Underwater Metal Detector,** Garret Sea Hunt XL500VLF, $500. Call Frank Klepadlo.
- **Wetsuit**, medium, women's with farmerjohn pants and tunic top, hot pink/black. Contact Andrea Wolf.
- **Oneill Drysuit with weights,** Black/blue, XXL, $450, Call Gary Morgan.

GENERAL MEETINGS

The next general meeting will be held on:
Wednesday, 7PM, July 17
Farmington Hills Public Library, 12 Mile Road west of Orchard Lake Road, Farmington Hills.

Schedule of upcoming meetings:
August 16
September 20
October 18
November 15

BOARD MEETINGS

The **August 2006** board meeting will be held at:
Tim Ouellette's
Time: **7:00 PM**
Date: Monday,
August 5, 2006

The **September 2006** board meeting will be held at:
Tim Ouellette's
Time: **7:00 PM**
Date: Monday,
Sept. 11, 2006

The **October 2006** board meeting will be held at:
Tim Ouellette's
Time: **7:00 PM**
Date: Monday,
October 2, 2006

GLA-WEAR

(add $3 for sizes over XL); add $5 for names/ monograms
Plus 6% sales tax
50% deposit on all special orders.

T-Shirts	$15 (S-XL)
Hats	$10
Sweatshirts	$30 (S-XL)
Jackets	$70 (S-XL)

T-shirts, hats, sweatshirts, jackets, bags . . . We can even embroider on your existing apparel and accessories. Attend club and non-club events in style!

To Order, contact:
Nadeen Ouellette or
Jan Ouellette

Going deep for debris

Divers get to the bottom of things in Union Lake

by Bill Laitner (Staff Writer)

May 14, 2006 (The Detroit Free Press)
It may be spring, but *ooh* the lakes are still cold. Union Lake, specifically, has been about 50 degrees -- colder if you go below the surface. Which is exactly where about two dozen divers headed last week, in a Commerce Township lake cleanup that only scuba divers could love -- underwater.

Along with the divers, the event invited scores of family members, friends, and the staff of a Farmington Hills dive shop that sponsored the environmentally upbeat Saturday-morning dive.

The organizer, James Mott, is manager at Sea the World Scuba Center in Farmington Hills.

"We've helped out in other cleanups at some other lakes, but this is the first time we've really taken the initiative to do this from the store," Mott said last week. Earth-friendly experts say volunteer cleanups on lakes and rivers -- like the upcoming Rouge River cleanup day on June 3, with sites in Farmington Hills and Novi -- are a great way for people to make a difference in Michigan's environment. Such cleanups also raise awareness among others about the serious impact of dumping and littering on the water, said Jackie Clark, spokeswoman for the nonprofit Friends of the Rouge group.

The Union Lake cleanup was unique, however, because besides cleaning up beaches, banks and shallow water, the trash pickers dove about 40 feet underwater.
The idea came to Mott when he led other divers on a training session in April at Union Lake, at the public-access boat ramp on Union Lake Road just south of Cooley Lake Road.

"I noticed there was a ton of trash along the water's edge," said Mott, 31, of Redford Township. He figured there was more under the surface. "So I decided to make our spring kick-off dive a cleanup dive. Everybody was real supportive," he said.

Scot Wernette, 38, of Southfield, is a veteran of subsurface cleanups.

"Typically, you're not pulling up anything large. You've got a lot of pop and beer bottles" along with some old tires and even the occasional picnic table, Wernette said.

"No buried treasure yet, but we're looking," he quipped.

Speaking of treasure, he and other divers carry a big investment on their backs. Wernette listed the tab as follows: dry suit and underwear to insulate against chill waters, $2,000; dual tanks and manifold piping, $1,000; air regulator, $300; dive light, $1,000; flippers, mask, knife, dive watch as well as other gear, another $1,000, and "scooter" -- a battery-operated, clip-on propulsion device, $3,500.

Soon after going underwater, sure enough, divers like Tim Ouellette, 56, of Milford, and the father-and-son team of Joe Hohner, 44, and Joshua Hohner, 13, of Canton, were bringing up beverage bottles, beer cans, a large plastic bait bucket, an orange traffic cone and plenty of other stuff that doesn't belong in a lake.

The cleanup will make diving nicer all summer long, said Craig Oshnock, owner of Sea the World Scuba Center. "People who throw litter into a lake may see it disappear, but divers see this stuff every time we go down," he said.

Onshore, more members of the group picked up litter. Alison Drouillard, 38, of Farmington Hills, has been diving for three years with her husband and three children.

But on this day, Drouillard and her 15-year-old daughter Gabriel Drouillard did their trash diving along Union Lake Road. They gathered muddy old boots, auto hubcaps and even a battered but complete plastic car bumper.

"Can you believe it?" the pair said, as they piled up the junk.

One lake lover who was delighted with the cleanup was Commerce Township Supervisor Tom Zoner.

The divers asked him six weeks ago for a permit for the event, but Zoner said he didn't feel one was needed -- not for volunteers cleaning up a lake and beach.

With a chuckle, he said: "It's kind of like the adopt-a-road programs. Only, underwater."

BOOTLEGGING ON THE FROZEN DETROIT RIVER

Prohibition became the law in 1920 and ended in 1933. During that time, the Detroit River became the major route for entrepreneurial smugglers who made rum running the second largest industry in Michigan, after cars. In 1929, illegal liquor was second only to the auto industry in Detroit in terms of revenue -- $215 million.

With the Detroit River less than a mile across in some places and 28 miles long, with thousands of coves and hiding places along the shore and among the islands, it was a smuggler's dream.

Along with Lake St. Clair and the St. Clair River, the waterways carried 75 percent of the liquor supplied to the United States during Prohibition. In winter, with the ice frozen, anyone from a single skater towing a sled to a loaded caravan of 75 cars could be seen. Individual efforts and congenial business relationships soon gave way, howerver, to more organized and dangerous groups ready to reap the profits.

Outrage of the citizenry at the violence spawned by Prohibition, along with the absurdity of trying to stifle a universal thirst and anger at imperiled civil liberties, combined to move public opinion toward repeal, and on May 11, 1933, beer was made legal. Seven months later, on December 30, the manufacture and sale of liquor were legalized in Michigan.

-- the Detroit News Library
submitted by Mike Sitko

AQUANAUTS TO ASTRONAUTS

Undersea 'aquanauts' practice for moon trips

Astronauts, divers simulate robotic tasks in underwater habitat

By Tariq Malik

Space.com

Updated: 2:46 p.m. ET April 19, 2006

A team of astronauts and divers is wrapping up a record-setting mission to the ocean floor — filled with undersea "moonwalks" and robotic surgeries controlled by a doctor high and dry in Canada.

The six aquanauts of the NASA Extreme Environment Mission Operations 9 mission, or NEEMO 9, are set to return to the Earth's surface Thursday after 18 days of underwater living aboard Aquarius, an undersea laboratory stationed 67 feet (20 meters) beneath the ocean surface, just off Key Largo in the Florida Keys.

"Every single thing that we're doing on this mission directly relates to exploration," NASA astronaut and NEEMO 9 aquanaut Ron Garan told Space.com during a phone call to Aquarius. "One of the big things we're trying to look at is to see how we can have collaborative effort between the human astronauts and robotic explorers."

NEEMO 9 is the longest NASA ocean floor mission and the longest to date aboard Aquarius. Since diving down to the undersea outpost on April 3, Garan has been working aboard the aquatic laboratory with fellow NASA astronaut Nicole Stott, NEEMO 9 commander Dave Williams of the Canadian Space Agency, and University of Cincinnati physician Tim Broderick. Professional Aquarius divers Jim Buckley and Ross Hein are also aboard the laboratory.

"Except for the launch, we're basically on a space mission," Garan said, adding that the mission is supporting NASA's plan to return astronauts to the moon by 2020. "We're in an extremely hazardous environment … it's a small confined space, with the crew on a very tight timeline."

Aquarius is operated by the National Undersea Research Center at the University of North Carolina at Wilmington for the National Oceanic and Atmospheric Administration. NOAA owns the ocean-floor laboratory, which has as much living area as NASA's Destiny lab module aboard the international space station.

Long-distance surgery
One of the key goals for the NEEMO 9 crew included the assembly and operation of a surgical robot designed to allow physicians to dress wounds remotely with only an Internet linkup between them.

Canadian doctor Mehran Anvari, a veteran of telemedicine

experiments with past NEEMO crews, directed the robot to suture a gash inside Aquarius. But instead of working aboard Aquarius, or even aboard a surface ship, Anvari sat at a workstation in the Canadian city of Hamilton, Ontario, where he directs the Center for Minimal Access Surgery at McMaster University.

"It was fantastic," Anvari said of the robot's performance, adding that he also mentored the NEEMO 9 crew in medical procedures. "Last [mission], we had very simple robotics and our traditional surgical robots could not fit inside the habitat."

But for NEEMO 9, the aquanauts constructed a small, portable robot equipped with cameras and dexterous pincers to manipulate rock samples and suture needles.

A two-second time delay — similar to that experienced in Earth-moon communications during NASA's Apollo missions — was also built into the system to simulate a lunar manned mission.

"This also has connotations for people on Earth," Anvari said of the telerobotic surgery. "A two-second time delay is something that you'd experience if you have more than one satellite hop for your communications to a remote area on Earth."

Anvari also used the robot surgeon to transfer ocean floor rock samples collected by Scuttle — a wheeled rover designed to test lunar robotic exploration techniques — into a storage compartment.

Mary Sue Bell, a planetary geologist at NASA's Johnson Space Center in Houston, watched over the procedure, which she said reduces the risk of contamination from human handlers.

"Even [astronaut] gloves can present a contamination risk," Bell said.

Undersea moonwalks

NEEMO 9 aquanauts did not leave all of the work in robot hands during their mission.

The crew also toiled alongside Scuttle to assemble underwater structures while wearing a special backpack to simulate the gravitational tug of the moon.

"We've weighed them out to the same gravity they'd experience on the moon, one-sixth Earth's gravity," Garan said of the aquanaut moonwalkers. "They assembled what is essentially a communications relay station."

The 20-foot (6-meter) structure is similar to one future astronauts may have to build on the moon in order to stay in contact with a lunar base camp on extended moonwalks, the aquanauts said.

"The lunar horizon is only about 1.5 miles (2.5 kilometers), and if they go beyond that we're going to need to communicate," Garan added. "This structure would allow us to extend our communications range out to 5.9 miles (9.5 kilometers)."

Garan said the lessons learned from NEEMO 9 and future Aquarius expeditions will be pooled alongside NASA's Apollo experiences in a comprehensive database to support the U.S. space agency's human space exploration efforts.

NASA has used the Aquarius laboratory as a training ground for space station crew members, including astronaut Jeffrey Williams, who served aboard NEEMO 3 in 2002 and called the underwater outpost last week from the international space station, where he serves as Expedition 13 flight engineer.

"One thing that we don't have here that you guys have down there are all those little critters outside," Williams told the NEEMO 9 crew from orbit, adding that his first few days aboard the space station were exhausting. "I remember on Aquarius, just sleeping very well. That was some of the best sleep I've ever had."

A growing laboratory

Much of the support for the NEEMO 9 crew — which includes wireless communications from the ocean floor, as well as high-speed connections for video, data and Internet access — has been due to a five-year effort to turn Aquarius from a coral reef camp into a robust undersea laboratory.

"In the course of these missions we've increased the bandwidth by 10 times for our real-time data communications from the sea floor," Andy Shepard, NOAA's Undersea Research Center director for Aquarius, told Space.com. "It was the big leap forward that we needed to really make the lab what we needed."

About $500,000 in NASA support over the last five years has allowed Aquarius — the last of NOAA's saturation diving platforms — to reach its current state. The agency is now working with NASA and the U.S. Navy to develop a mobile saturation diving platform that could aid in submarine rescues and marine studies.

"We're now looking for a suitable chamber that would be cost-effective," Shepard said, adding that the chamber would initially be used as an Aquarius extension. "We'd start off by doubling the living area of Aquarius. It's one of the more comfortable habitats … but we can use some more space."