

# MARIN SCUBA CLUB NEWSLETTER

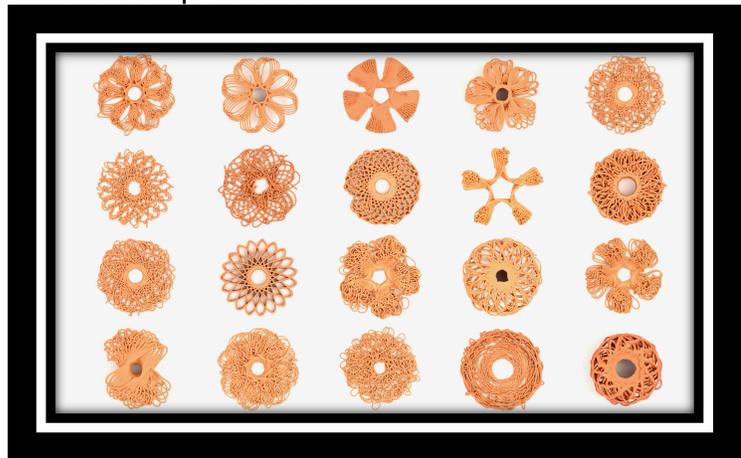
**VOLUME 29, NUMBER 1**

**JANUARY 2021**

## Wed., January 13 ZOOM Meeting: Professor Ezri Tarazi, “3D Printing of Terra Cotta Coral in The Red Sea”

The world’s coral reefs are dying. But one man’s lightbulb moment is trying to reverse this trend.

Professor Ezri Tarazi, Chair of the Design-Tech Lab and Industrial Design Program at [The Technion](#) in Haifa, Israel, said, “In recent years, I’ve been noticing widespread mortality of fish in coral reefs, kelp forests, and rocky shores from a spike in water temperatures.”



*Terra Cotta tiles are creating artificial reefs*

He continued, “Since 2016, I’ve been using 3D printing techniques for product prototypes, first to make artificial coral with bio-plastic, then with terra cotta to see if it became a habitable place for fish.”

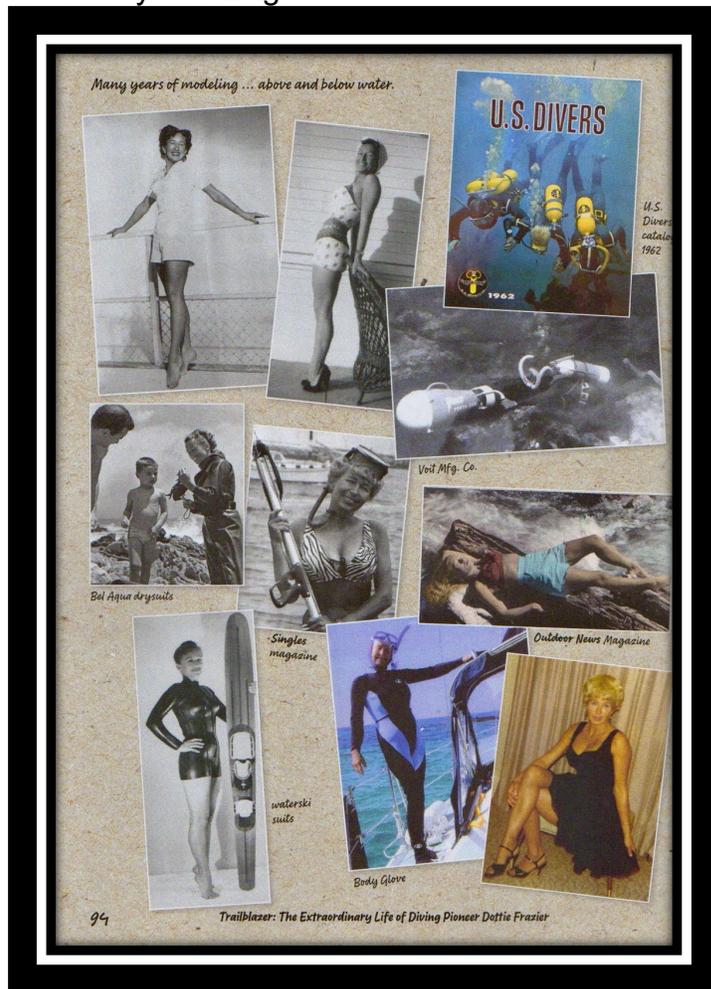
After three years of using a new approach of Nature-Centered Design, he used design research tools such as observations, prototyping, user validation, and other methods to achieve remedial interventions in nature.

“We then bought a 13-foot high 3D printer that uses clay and evolved to create ceramics from terra cotta. It prints in about 15 minutes with almost endless variations in design of lattice structures” (as shown above).

**See page 2 for more about Ezri Tarazi.**

## November Meeting Recap: Dottie Frazier — 98-Year-Old Scuba Industry Trailblazer

Dottie’s interview, facilitated by Bryan Eckert and his friend / her neighbor Vijay Raman, was absolutely amazing.



Buy her book: <https://tinyurl.com/y4qyz29c>

She was very energetic, loved speaking about her many accomplishments, and had a bounty of great stories — diving for coins... teaching her kids and SoCal doctors to get scuba-certified... showing house guests how to catch fresh fish for dinner a few blocks from her Long Beach home... being chased by a great white shark... becoming an award-winning pool shark... and anecdotes about a motorcycle-riding Grandma!

**See page 2 for more Dottie Frazier news.**

## More About Ezri Tarazi Red Sea 3D Coral.

Most of the artificial coral reefs he's building in the Red Sea near in the Gulf of Aqaba, south of Eilat in southern Israel, are about 10 feet high by 3 feet across and made from 100% terra cotta material.



“Different fish are attracted to different colors,” he adds. “And each piece of coral is custom-made, burnt in a kiln at 1,600° F., and completely unique — like terra cotta snowflakes. It is attractive to planula, the free-swimming, flattened, ciliated, and bilaterally symmetric larval forms of various coral species, which is helping to accelerate the growth of a natural coral reef.”



Join us for Ezri's presentation on Wednesday, January 13, starting at 7:00pm PT.

## More Dottie Frazier News.

And when you do buy her book, new chapters are now available that were not published. Email [gil@zeimer.com](mailto:gil@zeimer.com) and I will send you those bonus pages in PDF format. Dottie told us that all profits go to charity.

Again, to buy this great chronicle of a dive industry legend, visit Amazon for: “Trailblazer: The Extraordinary Life of Diving Pioneer Dottie Frazier” – <https://tinyurl.com/y4qyz29c>

Watch her presentation on Vimeo: <https://vimeo.com/489211054>

### **Holiday Quarantini Zoom Party was held on Sunday, December 6th**

Our holiday party was held via Zoom, but it did not prevent about 25 members from having a great time. Watch some of the videos here: <https://tinyurl.com/yc9zcnfb>



### **March Presenter: Marty Snyderman.**

This EMMY award-winning cinematographer, author of 10 books, and recipient of numerous industry accolades, will present the magic of his images and video over more than four decades on Wednesday, March 10<sup>th</sup>. Save the date!

### **Renew Your Membership for 2021.**

Discount Early Bird Rates renewals are 50%, which is \$25/singles and \$35/couple by 2/28/21. New members will pay full rate. If you wait until after 4/1/21, you'll pay a late fee of \$10 more, which will set you back \$60 for an individual membership and \$89 for a couple.

To renew your membership or join Marin Scuba Club, complete an online form on our website: <https://marinclub.org/membership/>.

# BOTTOM TIMES

**WE WILL DECIDE TO MEET IN PERSON OR ZOOM ABOUT A WEEK BEFORE EACH MONTHLY MEETING, OR WILL PROVIDE FURTHER INFO IN ADVANCE FOR EACH DIVE TRIP.**

**NEW MEETING DAY: 2<sup>nd</sup> WEDNESDAY OF THE MONTH!**

**January 13 (Wed) 2021: Professor Ezri Tarazi, Design-Tech Lab, The Technion, Israel.** Ezri will discuss his success with 3D printing of artificial coral reefs out of terra cotta in the Red Sea. Club Meeting: Zoominar Club Meeting. 7:00-8:45pm.

**February 10 (Wed): Brian Stanley, Bamboo Reef, SF. Details to come.**

**March 10 (Wed): Marty Snyderman, "Finding and Photographing Fishes and Their Behaviors".** Marty will share insights gained over almost 50 years on insights into fish behaviors and his techniques on how to capture their images. Zoominar Club Meeting. 7:00-8:45pm. Read more: [www.MartySnyderman.com](http://www.MartySnyderman.com)

**Spring 2021: Philippines El Galleon Dive Resort in Puerto Galera.** Rescheduling is on hold until travel is safe. Contact Ellen Sakoloff for details.

**April 14 (Wed): Speaker – To Be Determined. Details to come.**

**May 12 (Wed): Speaker – To Be Determined. Details to come.**

**June 9 (Wed): Speaker – To Be Determined. Details to come.**

**July 7 (Wed): Speaker – To Be Determined. Details to come.**

**August 11 (Wed): Speaker – To Be Determined. Details to come.**

**September 8 (Wed): Speaker – To Be Determined. Details to come.**

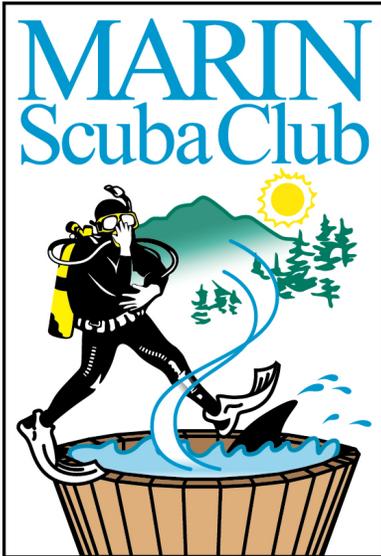
**October 13 (Wed): Speaker – To Be Determined. Details to come.**

**November 10 (Wed): Speaker – To Be Determined. Details to come.**

**Cabo Pulmo / La Paz Tentatively Rescheduled for October 2021:** The Cabo Pulmo, Mexico trip has been rebooked for arrival Saturday, October 23, 2021 for a 7-night stay. 22 MSC members are rebooking. Some members will be flying home on Saturday, October 30<sup>th</sup> and 10 members are taking a van to La Paz for whale shark snorkeling. This Fall 2021 trip is now wait list only. If you want to be added to the wait list, contact Barbara Wambach: [blwambach@comcast.net](mailto:blwambach@comcast.net).

**We promote safe diving.  
Remember to always plan your dive based on the conditions,  
be aware of your skills and equipment, and, above all,  
always stay with your buddy.**

Marin Scuba Club  
28 Marinero Circle, #30  
Tiburon, CA 94920



Next Meeting:  
Wednesday,  
January 13, 2021:  
Professor Ezri Tarazi,  
The Technion,  
"3D Artificial Coral Reef  
Printing in the Red Sea"  
**(ZOOM ONLINE MEETING)**

**PLEASE RENEW YOUR  
MEMBERSHIP NOW  
FOR 2021.**

The Club now meets on  
the 2nd Wednesday  
each month.

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**Marin Scuba Club: Board of Directors**  
<http://www.marinscubaclub.org>

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