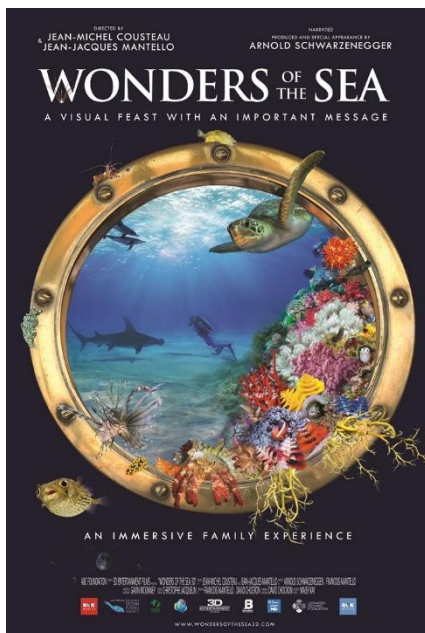


Giant Stride into ...Wonders of the Sea 3D!

Gary Lehman

One of the great things about being in a scuba diving club is that scuba friends can get together and experience inspiring, fun and informative events and happenings topside, which are related to scuba diving. Going to an event together is a fun social gathering, but also builds awareness, enhances and enriches our future diving! On January 17th, 2019 eight friends from The Scuba Sports Club met up at the Port Chester, NY AMC movie megaplex to experience *Wonders of the Sea – 3D* together.



The title “wonders of the sea in 3d” was promising, and we all nonchalantly just ‘expected’ to see amazing marine life, corals and many beauties to behold. And all in “3D”. Some of us previously experienced the multi-media *National Geographic Encounter: Ocean Odyssey* interactive exhibit in Manhattan two years ago which also featured 3D content, and for which 3D glasses were needed. We all felt those underwater experiences were impressively “immersive” (ahem), but just accepted that the low contrast/low luminance/low resolution was pretty much just unavoidable in 3D content. Same as it ever was...

We were WRONG! What we visually experienced in *Wonders of the Sea – 3D* radically exceeded all expectations! So, if you have an opportunity to see this 3D experience, our strong recommendation is to take advantage of it! 3D underwater filming is lightyears ahead of where it was just two years ago. The colors are bright and accurate. The coral and sea fan movements, and the fish, nudibranchs and shellfish were all alive - right there on the big screen - *practically enveloping us!* The visuals were so compelling that we virtually felt the current. We all had excellent buoyance control! (Oh wait. We weren’t in any water...). We could ‘swim’ through the plumes of plankton with the other sea life!

What we had not counted on was all this new video technology! In the world of videography, computers, video cameras, video technique, underwater lighting gear and digital magic *don't stand still!* Each of these improve continually. This improving technology results in cameras with ever-improving low light performance, less digital noise, better color capture with more life-like contrast, better techniques, improved computerized image correction/enhancement and so forth. When paired with passionate and skilled videographers who are deeply committed to the mission, the results (as demonstrated in this film) can be 'off the Richter' scale stunning! Everyone involved with the production of this film pulled out all the stops for this film. Each of us were captivated at the sea life and seascapes brilliantly displayed in front of us. Ain't never seen anything like it before! Technically, the 'mover and shaker' video componentry included state-of-the-art 3D cameras and videography techniques, ultra-high definition 4k imagery, ultra-high frame rate slow motion capture, digital backscatter removal, exceptional visual stabilization and superb macro/closeup photography resulting in never-seen-before, breathtaking video images.

Wonders of the Sea 3D: Its Mission - and the Sea Warriors engaged!

The objective of *Wonders of the Sea* is to inform and inspire all of us, create a wave of marine environment awareness of the harm which we are wreaking upon our oceans, and ignite our advocacy to protect them. Another objective is to spread this awareness to school kids, so that as they graduate and grow into positions of influence, they will participate with gusto and sense of purpose the mission of preserving our oceans. We did see several grade school-age children at the film under the watchful eyes of their teachers and class parents. They were as spellbound as we were! I hope that AMC theaters (and other theaters) can make this film available during school hours for school day trips, in order to broaden the exposure to Westchester school kids--and kids all over in other cities, towns and states!

Some of us remember the TV series (which ran from 1968 to 1975) *The Undersea World of Jacques Cousteau*, which was transformational in revealing to millions of people all over the world *via television* the underwater world. Jacques Cousteau ranged all over the world's oceans aboard his research ship *Calypso* with his trusted dive team, led by chief diver Albert Falco, with his intrepid son Philippe always in the middle of the action. Cousteau is a towering figure in the history of marine environmental activism for humans, because he brought to millions of people the undersea world. He was one of the progenitors of environmentalism, along with Rachel Carson who wrote *Silent Spring* in 1962 and before her, others such as John Muir (who founded the Sierra Club, the National Audubon Society, and was the father of the US national park system). Cousteau also helped design the forerunner of what was to become Nikon's Nikonos underwater camera. And of course, we all know that Cousteau most importantly helped develop the 'Aqua-Lung' – the Self-Contained Underwater Breathing Apparatus (SCUBA)! Cousteau's son Phillippe was the heir apparent and designated to carry on

Jacques Cousteau's work, but he was tragically killed in 1979 in a seaplane accident. Cousteau's oldest son Jean-Michel is a French oceanographic explorer, environmentalist, educator, and film producer in his own right, and is the guiding light for this film *Wonders Of The Sea-3D*. Jean-Michel is joined in the film by his son Fabien and daughter Celine, both also ocean explorers and passionate environmentalists. In this film we journey together with them, exploring differing marine environments from the Fiji Islands in the South Pacific, to the Sea of Cortez, the Catalina Island, and from there to Bimini in the Bahamas, and finally to the Mediterranean Sea. Each of these marine environments offers its own wonders - and different challenges. Jean-Michel observed that the technology used in this film permitted sea life to be seen and studied as never before possible. Nothing any of us has ever seen rises to the level of the imagery in *WOTS-3D*. And on a human level, it was heartwarming to see this family together – generation to generation -- doing what they each love, together. Diving and sharing their passion for the oceans. It was a paean to and carrying on the tradition of father and grandfather; it is a Cousteau dynasty – a beneficent one advocating for the oceans, the human family, and our neighbors in the ocean.

And the narrator is none other than Arnold Schwarzenegger! He even manages to incorporate some of his best tongue-in-cheek lines from his films into the script. This was an important touch, because it lightened the at-times heavy emotional burden imposed by watching this film, knowing/relearning/experiencing that so much of our life-giving oceans are under such terrible stress of poisoning by human activity. The film journey included a visit to Bimini to see the great hammerhead migration off Bimini in the Bahamas; it was sad hearing Jean-Michel wondering whether this might in fact be the last time he ever witnessed this majestic spectacle. Aside from a light-hearted "I'll be baaaaaacckkk", Schwarzenegger made an astute point: that this film was a perfect and important application of 3D technology – viscerally connecting the viewer to the oceans. (It is good to know that Arnold is on *our* side in this matter, and that he is an ardent environmentalist. Because we know that *this is one guy you don't want to cross!*)

'Take Aways' from ...Wonders Of The Sea 3D

Through the journey in this film we learned that *50% of the air we breathe comes from the oceans*. Clearly, as goes the ocean, so go we. Tiny phytoplankton in our oceans release oxygen into the water through the process of photosynthesis (converting the sun's energy to food) -- and this generates at least 50% of the Earth's oxygen (and perhaps as much as 85%, depending on which scientific source is consulted). Not enough people understand this. We are veritably talking survival here. Do we really want to dump nuclear waste and chemical warfare materials in concrete containers, hoping that the structures won't rupture? Have we really done due diligence to understand the damage to the mid-Pacific after the Fukushima nuclear reactor disaster? And plastics – killing sea life. Using explosives for fishing – destroying coral formations and so on...

Upon reflection about the film during dinner after the show, each member of TSSC shared different (and often similar) reactions to the film. All of us were stunned by the beauty we observed. We all were captivated by the images of the Christmas Tree Worm (*Spirobranchus giganteus*). We had never seen the brilliant colors and shapes in this life form!

Colleen nailed it when she commented that the film was an excellent way to teach people about the role of the ocean in maintaining life on Earth, and to make people understand -- maybe for the first time -- just how threatened our oceans really are. This was the key objective for the makers of the film. She also marveled at the brilliant colors inside the giant clams – who knew! And was disheartened by the 70 to 100 million sharks which humans kill each year. After seeing this film, Michael put the Fiji Islands on his bucket list! He commented on the colors, sea life, the detailed video of the roving crustacean eyes and antennae, and those spectacular christmas tree worms. Amanda was captivated by the *colors*! The blue jellyfish, and the coral formations bursting with yellows, purples, and lilac. In stark counterpoint to the grayed out dead coral clusters, like a dead city in a grim post-apocalypse science fiction movie. Michelle was moved to wonder *what we are doing to help protect the phytoplankton* which produce 50% of the oxygen we breathe; and similarly, how can we better protect the oceans - knowing that they are the world's largest carbon dioxide (CO2) reservoir, thereby reducing the leading cause of global warming. And Judy, Sharon and Ed had similar and impassioned observations. I had forgotten that corals are actually animals, and that their movements are not just 'swaying back and forth in the currents', but that these animals are actually hunting prey in the water, not just randomly swaying to and fro. The moving nudibranch videos were astounding. Normally we see just still images of these species, but seeing them moving around is amazing to behold! And the close-up video of a hawksbill turtle was breathtaking; there was a real sense of connection to this neighbor. And it was amazing to peer deep into the mouth of a giant grouper. These videographers were really on a roll!

Indeed, Senegalese poet and naturalist Baba Dioum observed that *"In the end, we will protect only what we love. We will love only what we understand. We will understand only what we are taught."* Bravo to the producers of this landmark, breakthrough film and everyone involved end-to-end for creating it, teaching all of us, and advancing awareness of both the beauty of the undersea world and the grave marine threats to it. Finally, there are a number of sponsors for this production, and the website for the film gives deeply well-earned shout outs and credit to these sponsors for helping to bring us this film. Please visit the website and read about the sponsors at the bottom on the lead webpage... <http://www.wondersofthesea3d.com/>. And to contribute to Jean-Michel's mission to save the ocean, we are all invited to support Jean-Michel's Ocean Futures Society by visiting https://org2.salsalabs.com/o/6122/p/salsa/donation/common/public/?donate_page_KEY=113

