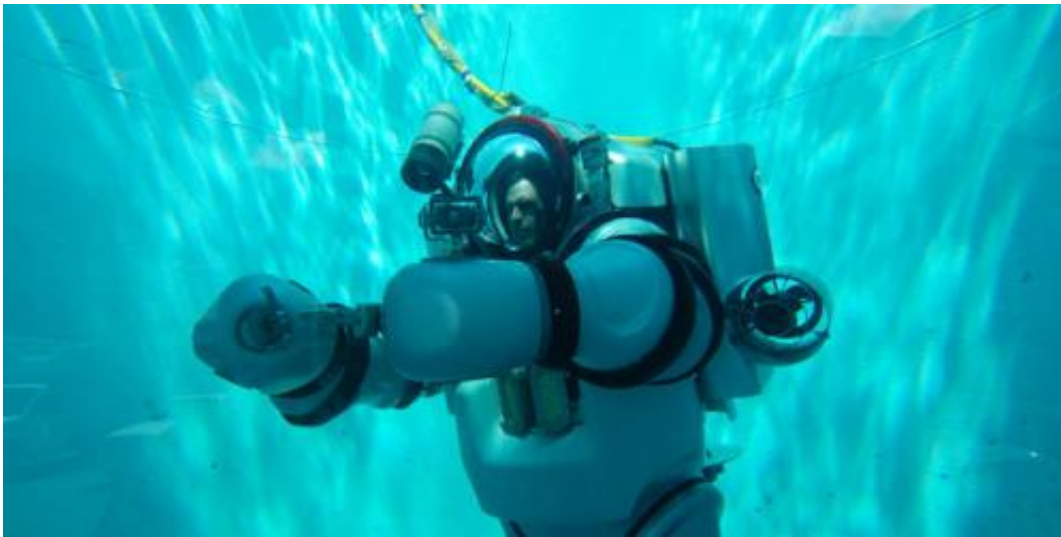


Researchers to use exosuit to explore ancient Antikythera wreck

June 5 2014, by Bob Yirka



Credit: American Museum of Natural History

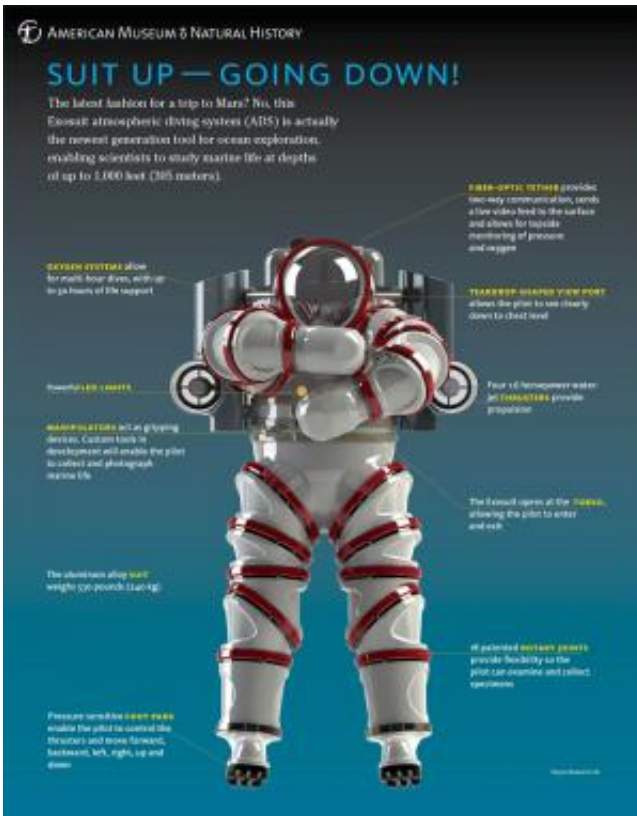
(Phys.org) —Marine archeologists with the Hellenic Ministry of Culture research program (with support from the Woods Hole Oceanographic Institution) are planning to explore the ancient Greek Antikythera wreck in the Aegean Sea, using an exosuit developed by Nuytco Research—originally for use in helping workers in New York's water treatment facilities. The iron-man looking exosuit allows a diver to descend to 1000 feet for hours at a time without need for decompressing upon returning to the surface.

The Antikythera was discovered by divers in 1900—attempts to explore

the wreck resulted in recovery of many artifacts, mostly famously, one that is known as the Antikythera mechanism—now referred to as the world's oldest computer. But it also led to injury and death due to the extreme depth (120 meters). Subsequent attempts more recently have led to more discoveries, but time constraints have prevented a thorough study of the wreck. Wearing the exosuit, the researchers hope will not only allow for mapping the wreck, but for discovery of more artifacts, some perhaps as interesting as the Antikythera mechanism.

The suit, which is essentially a body submarine, allows for both arm and leg movements, courtesy of multiple patented rotary joints. It also has 1.6 horsepower thrusters that are activated by the "pilot" via pads inside the boots. It's made of mostly aluminum, and weighs 530 pounds. The hands are claw-like, which has meant many hours of training in pools for the research team. The suit also has external LED lights and cameras, an oxygen replenishment system and a tether to the surface with a fiber optic gigabit Ethernet that allows for two-way communications, a live video feed, and monitoring of the suit and its wearer. In the event of an emergency, the suit has backup batteries and systems to maintain life support—if necessary, the four man crew up top can take over control of the suit to bring the diver out of harm's way.

The team has scheduled a test run of the suit this summer at a site called the Canyons off the coast of Rhode Island. If all goes well, plans for exploring the Antikythera wreck can proceed, paving the way for a whole new way to explore undersea wrecks from virtually any era.



Credit: American Museum of Natural History

More information: The Exosuit: www.amnh.org/exhibitions/past-.../exhibitions/the-exosuit

via [Newscientist](http://www.newscientist.com)

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