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## **Deep sea pioneer makes history again as first human to dive to the deepest point in the Indian Ocean, the Java Trench**

*Victor Vescovo completes the third dive of the Five Deeps Expedition and team discovers potential new hadal species*

DALLAS, TX (April 16, 2019) – For the third time, the Five Deeps Expedition has successfully dived to the previously-unvisited bottom of one of the world’s five oceans. The team completed a mission to reach one of the most isolated points on the planet: the deepest point of the Java Trench in the Indian Ocean. Now measured at 7,192 meters/23,596 feet deep, Victor Vescovo is the first human to dive to its depths in the *DSV Limiting Factor* (Triton 36000/2 model submersible) the world’s deepest diving, currently operational submarine.

At the bottom of the trench, the team managed to capture footage from the sub and from the landers of what are believed to be entirely new species, yet unseen by humans. From the sub, a new species of hadal snailfish was observed amongst many other bottom dwelling organisms, and the landers observed an extraordinary gelatinous animal – thought to be a stalked Ascidean, otherwise known as a Sea Squirt – which does not resemble anything seen before.

Dr. Jamieson said “amongst many other rare and unique observations, the stalked Ascidean was a really significant moment. It is not often we see something that is so extraordinary that it leaves us speechless. At this point we are not entirely sure what species it was, but we will find out in due course.”

The Five Deeps Expedition is being filmed by Atlantic Productions for a five-part Discovery Channel documentary series due to air in late 2019.

“Among other things, the Five Deeps Expedition has finally settled the debate about where the deepest point in the Indian Ocean is,” said Vescovo. “Our Kongsberg EM124 multibeam sonar – the most advanced sonar currently mounted on a civilian vessel –

provided detailed maps of the Diamantina Fracture Zone sea floor off the coast of Australia, as well as the deepest parts of the Java Trench. Together with physical visitation from unmanned landers and the *DSV Limiting Factor* submersible, we believe we have built the most precise maps possible of the deepest places in the Indian Ocean. The deepest point is in the central part of the Java Trench – not the east as was widely assumed - and that’s exactly where we dove.”

A second dive was piloted by Patrick Lahey, President of Triton Submarines and he was accompanied in the two-person submersible by Dr. Alan Jamieson, the Chief Scientist of the Five Deeps Expedition. With his dive to 7,180 meters it is believed that Dr. Jamieson, a Scotsman, has become the deepest-diving British citizen in history and the first to visit the hadal depths (greater than 6,000 meters). Jamieson added, “This was a big moment for hadal science and really demonstrated the scientific capability of the submersible. It has now proven that we can now do more, and access more places, than with any other marine vehicle in the world – including remotely-operated vehicles – at these extreme depths.”

“The tropical waters of the Java Trench are in direct but very welcome contrast to our last dive in the sub-zero waters of Antarctica,” said Rob McCallum of EYOS Expeditions. “Once again we have been able to obtain great quality bathymetry maps and then dive precisely at the deepest point. We know a lot more about the hadal zone of the Indian Ocean that we did a few days ago, so I am very proud of Victor, the team, and their contributions to ocean science.”

The Five Deeps Expedition is the first oceanic journey to take a manned, commercially-certified submersible vessel further and deeper than any in history. In addition to Vescovo’s solo dive, the expedition also accomplished:

- First descent to the bottom of the Indian Ocean
- The most solo dives - three - deeper than 7,000m have now been made by a single individual, Victor Vescovo
- First manned descent of any significant depth (below 2,000 meters) in the Java Trench and the first descent to the absolute bottom of the trench (7,192m)
- Deepest dive by a British citizen (Scottish) in that country’s history, by Dr. Alan Jamieson to 7,180 meters, and first to visit a hadal zone
- First seabed lander operations including biological sampling and depth confirmation at the bottom of the Diamantina Fracture Zone in the Indian Ocean, 800 miles west of the Australian coast

- Discovered at least 4 new species of life, including one significantly-sized, stalked Ascidean, previously unseen by any member of the expedition science team
- Completed the third dive of the Five Deeps Expedition and thus 60% complete with the overall mission, and remaining on schedule for completion in September 2019

“Every time Victor successfully completes another objective on the Five Deeps Expedition, we showcase the safety, reliability and importance of diving in a DNV-GL certified submersible,” said Patrick Lahey of Triton Submarines. “Triton is proud to have supported Victor as he became the first person ever to visit the deepest point in the Indian Ocean. This significant accomplishment serves to heighten interest in and awareness of our oceans as well as highlight the importance of a human presence to bear witness to the beauty of these remote areas of our planet.”

### **Mapping of Diamantina Fracture Zone for GEBCO**

In addition to the Java Trench dive, the Five Deeps Expedition has successfully conducted the first detailed, sonar mapping and sample-collection mission at the deepest part of the Diamantina Fracture Zone of the Indian Ocean – an area known as the Dordrecht Deep. Using advanced multi-beam sonar and an ultra-deep-sea lander, the team found it to be 7,019 meters deep, slightly shallower than previously thought when historically measured by other, less precise, methods.

This mission aimed to accomplish two goals:

1. Generate very strong evidence to conclude that this location is *not* the deepest place in the Indian Ocean as several geographic sources suggest, and
2. Provide the first biological samples from the deepest location in this area to add greater scientific insight into its unique biology.

The data will be an important contribution to the Nippon Foundation – GEBCO – Seabed 2030 Project to map the world’s seafloor in detail by the end of the year 2030.

“Kongsberg is especially pleased to learn of this formal collaboration with GEBCO and to see the Five Deeps Expedition fully exploiting the EM 124’s tremendous coverage and mapping productivity,” said Chris Hancock, Vice President of Sales for Kongsberg Underwater Technology, Inc.

In addition to mapping the fracture zone, a scientific lander from Newcastle University was deployed to approximately 7,010 meters for six hours to measure water temperature and physically confirm the depths registered by the sonar. The lander also

collected - for the first time - biological samples of scavenging crustaceans known as amphipods. These samples will be brought back to Newcastle University at the end of the expedition and genetically analyzed to examine the role of ultra-deep fracture zones in evolution, the role of other faults and basins in the dispersal of hadal species (species only found deeper than 6 km below sea-level), and the degree of genetic drift possible across deep ocean trenches.

### **The Next Dive: The Challenger Deep**

The next stop on the Five Deeps Expedition is the Challenger Deep within the Mariana Trench, commonly known as the deepest ocean trench on earth. The bottom of the Mariana Trench has been reached by only two other manned submersibles: James Cameron's *Deepsea Challenger* in 2012, and Don Walsh and Jacques Piccard's bathyscaphe *Trieste* in 1960 -- both of which only reached the bottom once. Thanks to the advanced design of the DSV *Limiting Factor*, it is believed that Vescovo will be able to reach the depths of the Challenger Deep multiple times within one week and remain at the bottom for longer than anyone has been there before. It will also be the first time any expedition has made a manned dive in the Challenger Deep using an advanced, multi-beam sonar and three independent landers to pinpoint the deepest area and precisely target the dive location. The Five Deeps Expedition will attempt to dive slightly deeper than even the USS *Trieste* did in 1960, if it is possible.

The other remaining major dives planned for the Five Deeps Expedition include:

- Tonga Trench (Pacific Ocean, 10,882 meters)
- Molloy Deep (Arctic Ocean, 5,573 meters)

For updates on the expedition, visit [fivedeeps.com](http://fivedeeps.com) and follow along on Facebook, Instagram and Twitter, @FiveDeeps. The website also has a detailed blog of the latest voyages and all other the information one might need regarding the technology, scientific goals, crew and team bios, expedition overview.

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### **Partnership opportunities**

Organizations are welcome to submit interest in supporting the expedition and its scientific missions to [FiveDeepsPress@richards.com](mailto:FiveDeepsPress@richards.com).

### **About Caladan Oceanic**

Caladan Oceanic is a private company dedicated to the advancement of undersea technology and supporting expeditions to increase the understanding of, and support, the productive sustainment of the oceans. Founder Victor Vescovo has long had a

passion for exploration and has summited the highest peak on all seven of the world's continents including Mt. Everest and skied at least 100 kilometers to both the North and South Poles. He also served for 20 years as an officer in the US Navy Reserve, retiring with the rank of Commander. With the completion of the Five Deeps Expedition, Vescovo could become the first person in history to have been to the top of all the world's continents, both poles, and the bottom of all its oceans.

### **About Triton Submarines, LLC**

Triton Submarines of Sebastian, Florida, is the most experienced civil submarine producer in the world today – and the only contemporary manufacturer of acrylic and titanium pressure-hull-equipped personal submarines to deliver multiple classed and certified vessels capable of diving to 3,300 feet (1,000 meters) or more. Triton Submarines' senior staff have over 350 years of combined experience with more than 80 different submersibles, and their operations team members have together logged over 25,000 dives. Triton clients also enjoy superlative after-sales service and technical support from a company dedicated to their total satisfaction.

### **About EYOS Expeditions**

EYOS Expeditions has been designing complex and challenging expeditions for private vessels since 2008. Drawing on the decades of experience of the company's co-founders, the EYOS team has delivered over 1,200 safe and successful expeditions to some of the most remote destinations on Earth. EYOS Expeditions holds several "world firsts" and routinely takes clients to destinations rarely or never before visited. EYOS Expeditions and sister company Expedition Voyage Consultants has worked behind the scenes on many of the industry's groundbreaking itineraries and has a long history of delivering once-in-a-lifetime experiences for clients while maintaining the highest standards of safety, professionalism and environmental stewardship. EYOS Expeditions is today regarded as the industry leader for planning and operating remote expeditions using submersibles.

### **About Atlantic Productions**

Atlantic embraces several companies including the BAFTA- and Emmy-winning special effects company ZOO VFX and virtual reality company Alchemy. In 25 years, it has built a reputation for world-class storytelling, enhanced by the latest technology. Their diverse output includes 11 projects with David Attenborough including BAFTA award-winning Flying Monsters, Museum Alive (Sky) and The Great Barrier Reef; Inside the Commons (BBC), Time Scanners (NatGeo), Mission Galapagos (BBC), Jerusalem, City of Heaven (Discovery) and the acclaimed theatrical film The Wildest Dream: Conquest of Everest. Recent projects include the critically acclaimed Judi Dench: My Passion for Trees (BBC) and The Coronation (BBC/Smithsonian/ABC), made with the Queen.

Atlantic won the first-ever BAFTA award for virtual reality with David Attenborough's Great Barrier Reef Dive. Discovery Channel have commissioned Atlantic Productions to film a five-part documentary series covering the Five Deeps mission.

### **About Discovery Channel**

Discovery Channel is dedicated to creating the highest quality non-fiction content that informs and entertains its consumers about the world in all its wonder, diversity and amazement. The network, which is distributed to 88.3 million U.S. homes, can be seen in 224 countries and territories, offering a signature mix of compelling, high-end production values and vivid cinematography across genres including, science and technology, exploration, adventure, history and in-depth, behind-the-scenes glimpses at the people, places and organizations that shape and share our world. For more information, please visit [www.discovery.com](http://www.discovery.com)

### **About Newcastle University**

Newcastle University, based in Newcastle upon Tyne, United Kingdom, is a modern civic university with a proud tradition, committed to world-class academic excellence – but excellence with a purpose. Newcastle University is a red brick university and is a member of the Russell Group, an association of prestigious research-intensive UK universities. The University's international strategy supports our aim to have a strong international community, experience, reputation and impact. The University hosts students from over 120 different countries and staff from over 80 countries with excellent cross-cultural interaction from working with more than 200 overseas universities and institutions. The university has one of the largest EU research portfolios in the UK. The annual income of the institution for 2017–18 was £495.7 million of which £109.4 million was from research grants and contracts, with an expenditure of £483.3 million.

### **About the British Geological Survey**

The British Geological Survey (BGS) is a partly publicly-funded body which aims to advance geoscientific knowledge of the United Kingdom landmass and its continental shelf by means of systematic surveying, monitoring and research. The BGS advises the British government on all aspects of geoscience, as well as providing impartial advice on geological matters to the public, academics and industry. BGS is a component body of the UK Natural Environment Research Council which is the UK's leading body for fundamental, strategic and applied research and monitoring in the environmental sciences both in the UK and for international projects. The core outputs of the BGS include geological, geophysical, geochemical and hydrogeological maps, descriptions and related digital databases. Scientists at the BGS produced the first comprehensive

map of African groundwater reserves. One of the key strategic aims for the next decade is to complete the transition from 2-D mapping to a 3-D modelling culture.