

UNDER THE POLE III • TWILIGHT ZONE • 2017/2020

## **THE START OF THE SECOND LEG OF THE EXPEDITION IN FRENCH POLYNESIA**

Early November 2017, Under The Pole III - under the leadership of Emmanuelle Périé-Bardout and Ghislain Bardout - finished the first leg of their latest adventure: sailing through the Northwest Passage for a study on natural fluorescence as well as on the Arctic biodiversity. During winter, the team was back in France, and has been preparing for the next chapter of this expedition: 15

months of underwater exploration in French Polynesia in order to study the deep corals reefs, and the apex predators. Subsequently, they will deploy their innovative "Capsule", which will allow divers of 24, 48 or 72 hours, which is a likely game-changer in the underwater observation of the oceans.

### **THE "DEEPHOPE" PROGRAM: A STUDY OF DEEP CORALS**

In July 2018, Under The Pole III expedition will be starting a research program which will take 12 months to complete. This program called "Deephope" - in partnership with the CRIOBE (Insular Research Institute and Environment Observatory) - will be taking the divers to the deeper coral reefs of the five archipelagos of French Polynesia. Even if we tend to be familiar with the reefs close to the surface, especially with 2018 being the international year of coral reefs, we know a lot less about the deeper coral environments living past the 50 meter mark, whilst these mesophotic corals could actually act as a refuge for the surface corals. Supported by the ANR (National Agency for

Research), the objective of the "Deephope" program is to understand the relationships between the deep and the shallow corals. Thanks to the use of diving rebreathers, as well as equipments allowing communication with the surface, the team at Under The Pole will become the eyes and hands of the scientists from the surface down to 120 meters deep. This study might enable the regeneration of surface corals by a smart use of the deeper ones.

### **SUPERPREDATORS**

Simultaneously to the research led on corals, the Under The Pole III team members will also be working on a study of the great hammerhead and the bull sharks. Those apex predators play a critical role in the balance and the resilience of the underwater ecosystems. The main objective of this mission will be to understand the ecological roles of the two species. Guided by the scientists, the divers' mission will be to collect information

on the animals (observation, DNA, sampling, marking and tagging for understand their further movements, etc...) as well as performing a behaviour study. The short term objective is to better protect these species by creating marine protected areas, allowing for sustainable eco-tourism to take place and raise awareness about their protection.

### **THE "CAPSULE" PROGRAM: SATURATION DIVING AT THE SERVICE OF SCIENCE**

In their constant pursuit of innovation to push back the limits of underwater exploration, Ghislain Bardout and his team have imagined and designed the "Capsule": an

underwater observatory that can accommodate 3 divers, just like Jacques-Yves Cousteau's wildest dreams. The objective is simple: getting rid of the time constraint and

allow immersions up 72 hours without resurfacing. Ghislain Bardout explains: "In the forest, in the deserts, or in the mountains you need time to blend in to finally see the spectacle of nature unfolding. The issue is the same with diving. But underwater, we are limited by the quantity of air in our tanks, by the compulsory decompression stops, by tiredness...The objective of the "Capsule" is to create an underwater base-camp in which we will be able to rest, to hydrate, to feed...Without having to go back to

the surface. Whilst we will be doing that we will still be able to observe the environment through the glass domes and then go out again for long diving excursions". The real size prototype of the "Capsule" is now finished and the construction will start in March 2018. It will then be shipped to French Polynesia for the first campaign of deployment in real life conditions from June to August 2019!

## AGENDA

- MARCH**  
Departure and preparation of the boat in Alaska, USA
- APRIL**  
Sailing to Hawaiï, USA
- MAY**  
Stopover in Hawaiï, USA
- JUNE**  
Sailing to French Polynesia
- JULY**  
Arrival in French Polynesia and training for the divers
- EARLY AUGUST**  
Workshop with all the scientists and all the members of the expedition before the launch of the research programs
- AUGUST 2018 TO MAY 2019**  
Execution of the "Deephope" and "Superpredators" programs in the 5 archipelagos of French Polynesia
- JUNE TO SEPTEMBER 2019**  
The "Capsule" program
- SEPTEMBER 2019**  
Sailing towards Patagonia and Antarctica for the 3<sup>rd</sup> leg of the expedition

## ABOUT UNDER THE POLE

In a pioneering spirit, Under The Pole expeditions have the objective of pushing back the limits of human underwater exploration, thanks to an audacious approach and constant innovations. Internationally renowned for their expertise in polar diving, they have already collaborated

with 150 team members and over 200 companies or research institutes. Under The Pole is led by Ghislain Bardout and Emmanuelle Périé-Bardout, a couple who have transformed their passion for exploration into a career and a lifestyle.

## CONTACT

- MEDIA**  
**Grégoire Chéron**  
+33 (0) 7 82 92 59 10 • [gregoire.cheron@heliom.fr](mailto:gregoire.cheron@heliom.fr)
- PHOTO**  
Imagery content available via the Zeppelin Agency:  
[www.zeppelin-geo.com/galleries/monde/utp3/utp3.htm](http://www.zeppelin-geo.com/galleries/monde/utp3/utp3.htm)  
**Bruno Valentin**  
+33 (0) 6 82 07 87 90 • [contact@zeppelin-geo.com](mailto:contact@zeppelin-geo.com)
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