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A beautiful, ice covered seafloor

22. April 2022

The ice covered waters of the Weddell Sea are very beautiful: a mix of icebergs, seals, penguins and areas of open water. Deep below, however, the beauty continues, where a diverse collection of animals make their living on the seafloor. With the Ocean Floor Observation and Bathymetry System "OFOBS", a one tonne camera system towed behind the ship, scientists and crew together managed to collect seafloor images and videos during nine deployments. The skilled crew maintain a flight height of 1.5 meters above the seafloor for the camera system, by winching it up and down as needed, with the bridge officers steering the ship along a course set by the scientists. During this expedition, we repeated some camera tows conducted over the last two decades, so we can see if the seafloor community has changed, as well as some deeper areas for the first time. We filmed many beautiful sponges, crinoids, fish, octopuses, starfish, sea spiders - a great range of life deep under the surface.



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Four Arnoux's beaked whales discovered in the Weddell Sea

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During one of the regular top-predator surveys from the ships' helicopter, we encountered four Arnoux's beaked whales logging in an open water lead in the sea ice. With the top-predator surveys we calculate the food and energy needs within the sea-ice food web. These Arnoux's beaked whales are poorly known and sightings are rare. Together with the closely related northern hemisphere Baird's beaked whale, they belong to the biggest of all 23 species of the Beaked whale's family and can grow up to ten meters. Arnoux's beaked whales occur in cool offshore waters, mainly from the Sub-Antarctic and Antarctic, south of approximately 35 latitude south up to the ice shelf of the Antarctic continent. Their prey consists of deep water squid and possibly deep water fish which they catch in water depths of up to 1000 meters or probably more. This rare sighting is a valuable addition to our top predator distribution and abundance surveys.



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Fire protection training in the ice

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Prepared for emergencies: Needless to say, one always hopes that everything goes according to plan on such a research expedition to one of the outermost corners of the earth and that no unforeseen difficulties arise. But if something does go wrong, the journey for a rescue help would be long and a short stop on land is often not an option. Therefore, the crew members of the Polarstern must also be prepared for emergency situations. Fire prevention and fighting are the top priorities, because hardly anything is as dangerous on the open sea as a fire. Fires usually spread quickly on ships and can cut off the limited escape routes. The correct wearing of breathing apparatus, the handling of fire extinguishers and approaching the situation with calm in extreme situations are therefore trained regularly. In order to be able to effectively fight fires on board, powerful CO₂ extinguishing and high-pressure water mist systems as well as fire pumps are also available.