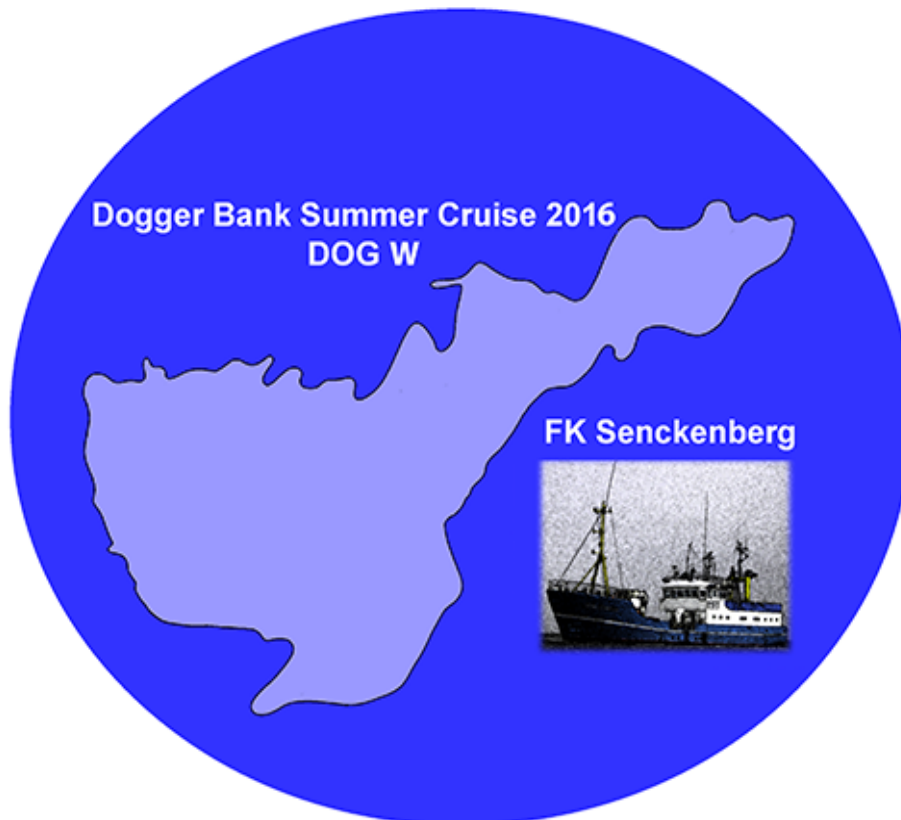


SENCKENBERG

Report on the 2016 Dogger Bank cruise with FK Senckenberg

04. 07. – 09. 07. 2016



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Contents:

1. Aims and setting
2. Narrative
3. Methods
4. Station map

1. Aims and setting

The interannual variability of the epibenthic fauna of the Dogger Bank is a long term project of the Senckenberg Research Institute since 1991. This project aims at gathering basic data which is used for understanding presumed environmental changes. Therefore the study refers to 37 stations (see map in Annex) that are, whenever possible, sampled on a yearly basis in the same season with the same gear. The fauna is recorded quantitatively from each sample in order to allow studies on relative abundance. Additionally, temperature and current parameters are recorded to correlate with faunal composition and species abundances.

The present cruise forms the 23rd of the series and gets the suffix DOG-W. All former cruises were labelled after the alphabet with one letter starting with DOG-A in 1992. The first in 1991 was called DOG without any suffix.

This cruise was conducted by the Department for Marine Zoology at the Senckenberg Institute in Frankfurt am Main.

2. Narrative

The cruise started on Monday, 2016-07-04. On 10:10 CEST (UTC+1), the vessel left the shipyard and headed towards the main working area, the Doggerbank.

Station 14 (see station map) at british waters was reached on July 06, 2016 at 08:20 CEST. At this and the following stations, the following technique was used: First, a standardized endobenthic sampling with the Ring Dredge was performed. Then, a hydrocast was used to measure the bottom temperature and salinity. Subsequently, one sample with a 2 m beam-trawl was taken, towed for 2 kn of speed on a length of one nautical mile (for more information see methods, chapter 3). These procedures took place on stations 3 to 18, 20 to 23 and 26 (see station map, chapter 4). After station 26, the ship crane showed a malfunction and the cruise could not be continued. Thus, sampling at the Dogger Bank was finished on July 09, 2016 at 13:00 CEST. FK Senckenberg headed back to Wilhelmshaven. The vessel was moored at Wilhelmshaven port on July 10, 2016 at 16.50 CEST.

The exact sequence of stations sampled can be seen at the station list (annex 1).

3. Methods:

Standard endobenthic sampling was performed with the Ring Dredge, being towed over the ground for approximately three minutes per station. The samples were recorded qualitatively on board ship, only few material was preserved for later analysis.

For the measurement of the temperature and salinity of the sea bottom, a hydrocast was lowered to the seafloor, closing there. Temperature and salinity were recorded after the hydrocast was back on board again.

Epibenthos was collected with a 2m beam trawl with a tickler chain and a chain in the bottom rope. The minimum mesh size in the cod-end was 1 cm², so that animals above that size were collected quantitatively. The trawl was towed for 1 nautical mile at a speed of 2 knots. The sample was secured quantitatively (as far as possible) and washed through a set of sieves with 1 cm maximum and 1 mm minimum mesh size, respectively. The 1 cm-fraction was identified and counted on board the vessel, organisms not readily identifiable were preserved and taken back to the home laboratory. The smaller fractions were also preserved and taken back for qualitative analysis.

4. Station map

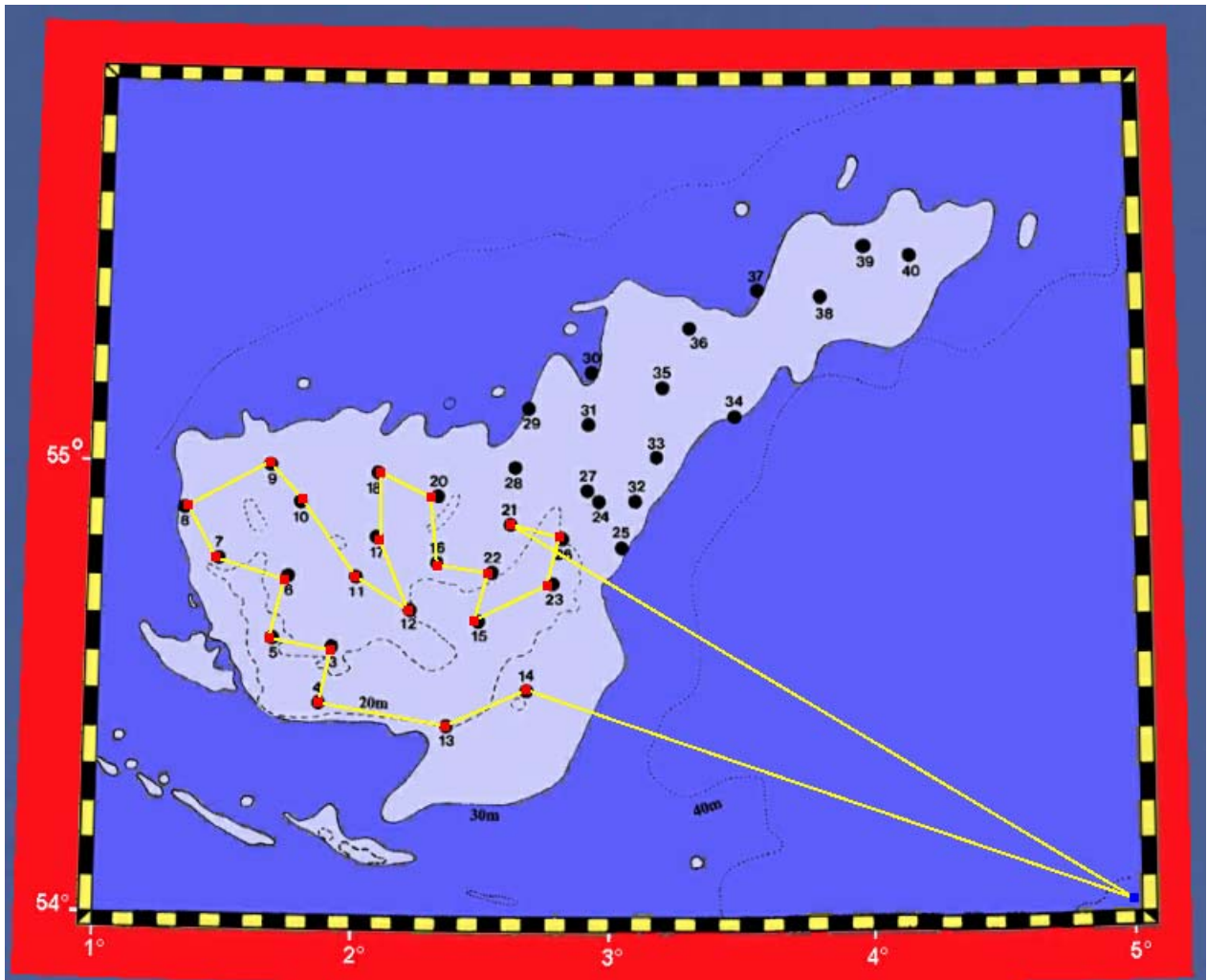


Fig. 1 Station map. Black dots: stations. Yellow line: ship course.