

FRV WALTHER HERWIG III

Cruise 330: IBTS 2010 (I)

22.01. – 18.02.2010

REPORT

Scientist in charge: Dr. G. Wegner

Objective

Participation in the ICES co-ordinated 'International Bottom Trawl Survey' (IBTS) 2010, 1st quarter, in the North Sea.

The objective of the survey is to estimate the strength of the upcoming year classes of the demersal fish species cod, haddock, whiting and Norway Pout, to some degree also pelagic species like herring, sprat and mackerel. In addition, the distribution and abundance of herring larvae are to be investigated. Temperature, salinity, and nutrients in the area of investigation are monitored.

Narrative

Time schedule

22.01.2010 (15:30)	Departure Bremerhaven,
22.01. – 04.02.	Sampling / fishing (German Bight, central and north-eastern North Sea)
04.02. (12:00) – 05.02. (15:00)	Break in Bergen, Norway)
06.02. – 17.02	Sampling / fishing (northern and central North Sea)
18.02.2010 (17:00)	Arrival Bremerhaven

The IBTS is an ICES program coordinated by the Netherlands' Institute for Marine Resources and Ecosystem Studies (IMARES). The rectangles assigned to Germany in the northern and central North Sea were to be fished by means of the ICES standard bottom trawl GOV during daytime and the standard plankton MIK (Methot-Isaac-Kidd) net during nighttime. Additionally, in each rectangle temperature and salinity measurements as well as nutrient samples were to be taken. Due to suitable weather conditions, WALTHER HERWIG III was able to fish in 74 rectangles of the assigned 77 (Fig 1). Three squares were dropped in consequence of bad weather and too much swell off Sylt directly at the end of the cruise. In total, 154 MIK and 74 valid GOV hauls as well as 74 CTD profiles were conducted.

Results

Total catches of the GOV hauls were between 6.5 and 3273 kg, on average 336 kg, about 100 kg per haul more than during the year before. Compared with the previous year, more juvenile haddock, whiting, and sprat were caught by "Walther Herwig III". The still small catches of cod were above last year catches, too. Herring was moderate and less abundant than last year. Norway pout catches were nearly the same than last year.

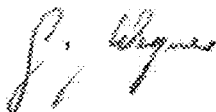
Total number as well as the mean abundance of herring larvae from the MIK net hauls was a little lower than last year. The larvae were relatively wide spread in the central North Sea including patches of larger concentrations. The reduced numbers in the northern areas of the North Sea should result from the near surface transports to the south by continuously northern winds.

Quite a lot of juveniles of lightfish *Maurolicus muelleri* were found in the central northern most MIK catches (up to 294 in one station). The species normally occurs in deeper Atlantic waters. They may indicate an increased inflow of Atlantic water into the northern North Sea areas during this winter season.

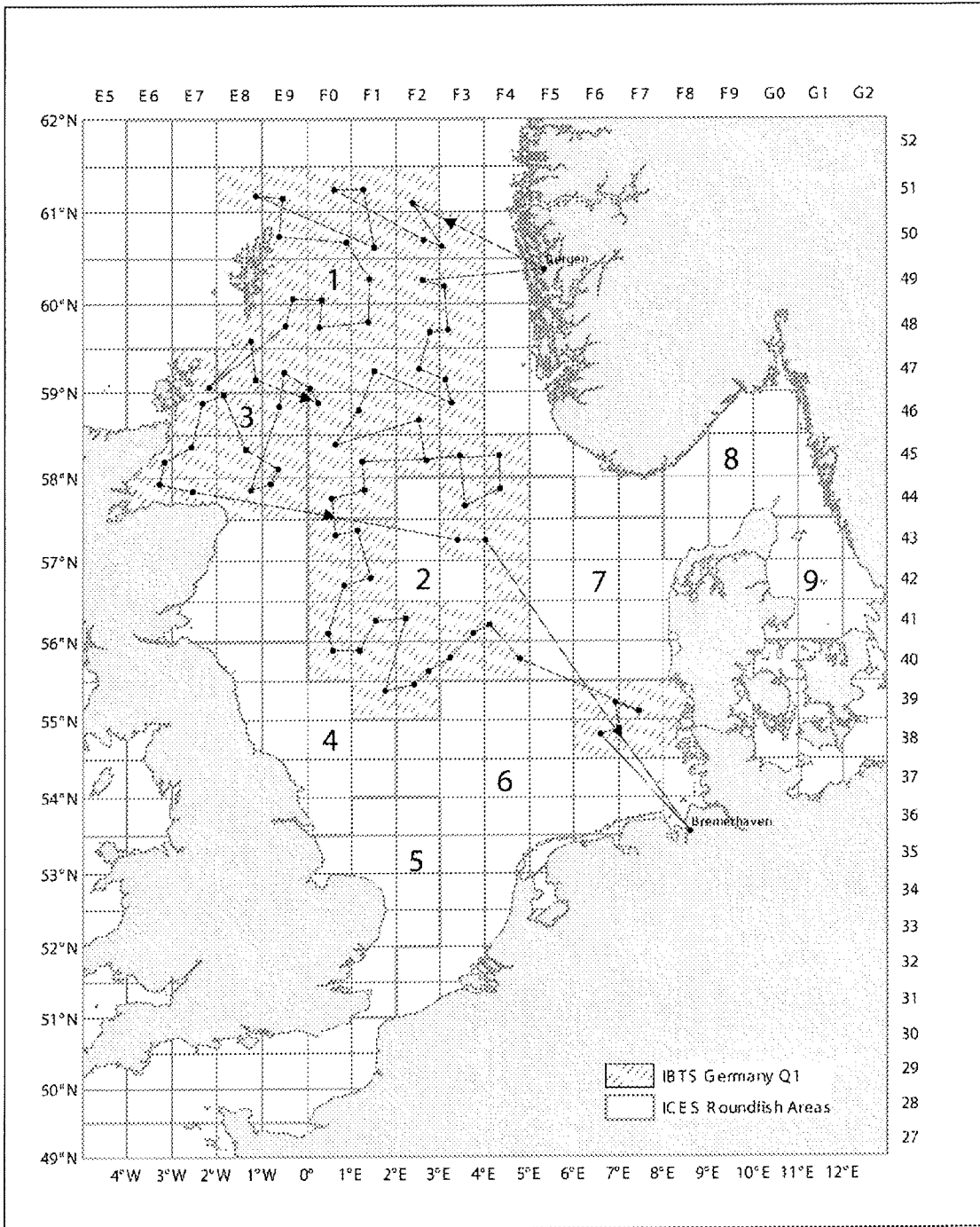
This is supported by increased salinities in the central northern North Sea. Sea surface temperatures in the investigation area were between 3.0 to 8.8°C, predominantly between 6.8 and 8°C. Although strong cooling prevailed during the cruise period, the surface temperatures still were about 0.5 to 1 K above the long term average in the central northern area. Some slight thermal and haline stratifications were found in the northern areas. In the Moray Firth coastal water was spread covering the North Sea water. The Water of the Norwegian coastal current was blocked by the northern Wind components lasting since second half of December. Thus, this surface water spread to areas west of the banks aside the Norwegian Trench. In general, the water column was vertically well mixed. Thus, oxygen saturation was found in all depths.

Participants

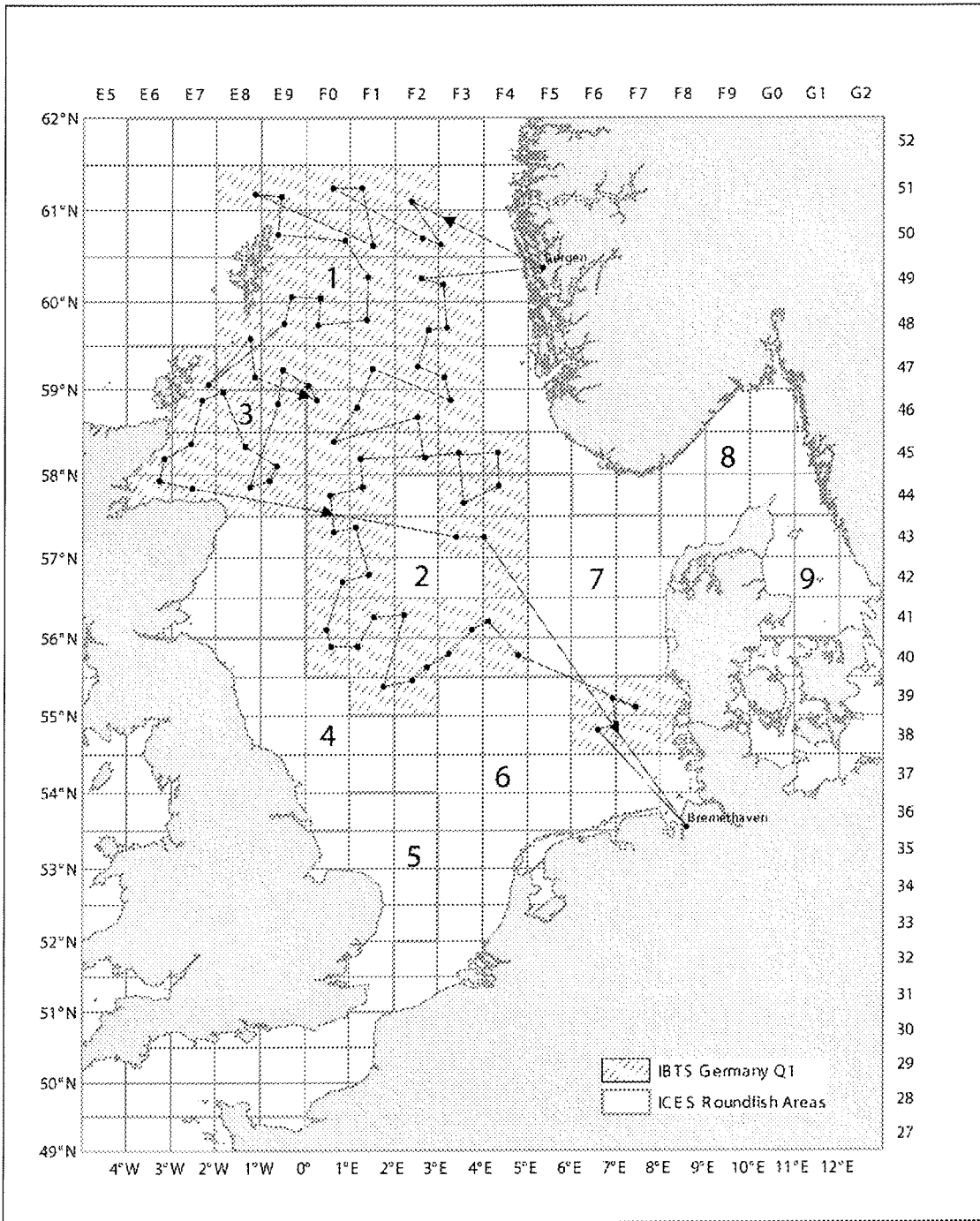
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Dr. Gerd Wegner



IBTS 1st quarter 2010
Track of cruise 330 of FRV "Walther Herwig III"



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