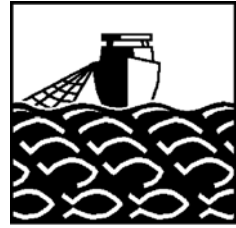


**Federal Research Centre for Fisheries  
Institute for Fishery Technology and Fishery Economy**



**Cruise Report**

**International Acoustic Survey for Pelagic Fish Stocks in the North Sea**

**R/V "SOLEA"  
28.06. – 19.07.2005**

**Cruise No. 544**

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## International Acoustic Survey for Pelagic Fish Stocks in the North Sea

### Cruise 544 R/V "SOLEA"

Date: 28.06. – 19.07.2005

#### Participants:

S. Bednarz	FTZ/University Kiel
M. Drenckow	Inst. for Fishery Technology, Hamburg
G. Gentschow	Inst. for Sea Fishery, Hamburg
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#### Objective

The 544th survey of the R/V "Solea" was conducted in the framework of the international hydroacoustic survey on pelagic fish in the North Sea, which is coordinated by the ICES Planning Group for Herring Surveys (PGHERS). The main objective was to assess clupeoid resources, mainly herring and sprat, in the North Sea.

The reported acoustic survey is conducted every year to supply to ICES the most important fishery independent data (i.e. biomass estimate) for the assessment of herring and sprat stocks in the area.

#### Narrative

RV "Solea" left the port of Cuxhaven on 28th June 2005. The investigation area covered the southern part of the North Sea from 52°N to 56°30'N. The acoustic survey was performed during day time. The acoustic equipment was an echosounder EK60 working on 38 and 120 kHz. The hull mounted transducer ES38B and ES120-7 were calibrated in the open sea on the eastern tail of the Dogger Bank in a water depth of 32 m. The echo integration, i.e. the allocation of the area backscattering strength,  $s_A$ , to the species was done by the post-processing system EchoView 3.10. The specific settings of the hydroacoustic equipment were used as described in the 'Manual for Herring Acoustic Surveys in ICES Divisions III, IV and VI' (ver. 3.1, ICES CM 2003/G:03, Appendix 4).

Pelagic trawl hauls were carried out to identify the target species. From each haul sub-samples were taken to determine length and weight of fish. Further sub-samples of herring and sprat were examined for sex, maturity, and age. After each trawl haul hydrographic conditions were investigated by a CTD probe. The survey ended on 19th July 2004 in Cuxhaven.

#### Results

The cruise track (Figure 1) reached in total a length of 2186 nautical miles. 41 trawl hauls were carried out and hydrographic parameters were measured on 74 stations. Catch compositions of the conducted hauls are presented in Table 1. Abundance estimates of the pelagic fish species will be presented after further analysis of the data in combining  $s_A$  values, and species and size distribution of the fish on ICES statistical rectangle basis.

Eberhard Götze

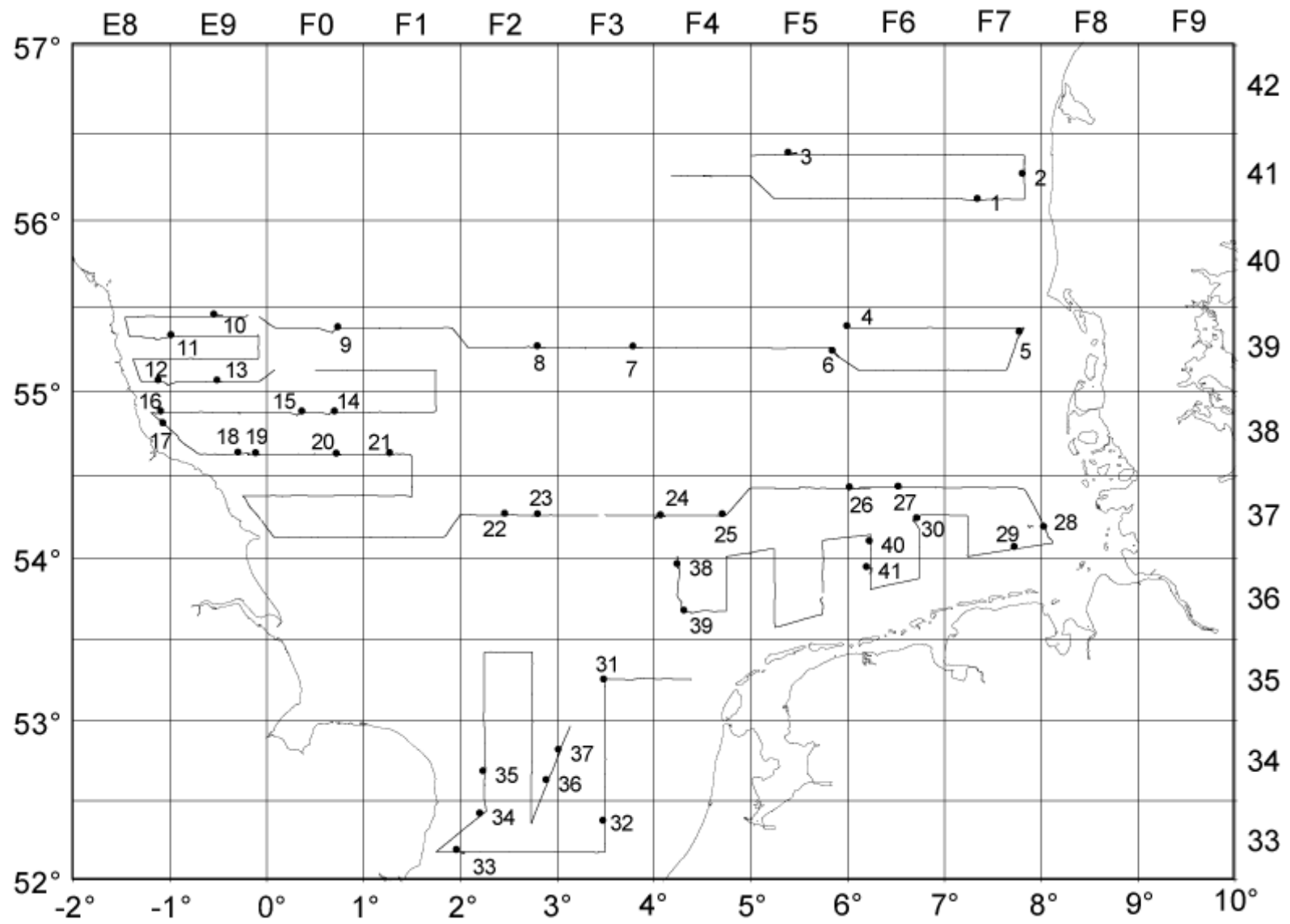


Fig. 1: Cruise track and trawl positions RV „SOLEA“