

## Cruise Report 771 FRV Solea



Cruise Leader: Kay Panten

### Summary

The purpose of this trip was again the qualitative and quantitative recording of the demersal fish fauna in the German Exclusive Economic Zone (EEZ) of the North Sea. In conjunction with the results of investigations of the benthic invertebrate fauna of other research institutes possible changes due to increasing industrialization (wind farms, sand and gravel extraction) are to be detected. The entire EEZ was divided into different ecological zones and covered with a fixed station network. Since the investigation began in 2004, an annual exchange between the beam trawl and bottom trawl maintained. This year the investigations were therefore carried out again with the beam trawl.

A total of 38 fish species and 52 invertebrate species were detected in the 40 carried out hauls with the beam trawl. The fish were dominated by species dab, plaice, whiting, solenet and scaldfish. The catch of invertebrates consisted mainly of starfish, swimming crabs and hermit crabs.

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FIZ-Fischerei

TI - PR

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## **Objectives**

1. Monitoring of the demersal fish fauna in the German EEZ
2. Distribution of temperature and salinity in the area of investigation

## **Narrative (Fig. 1)**

FMS Solea left Cuxhaven on December 2nd at around 2:30 p.m. In the following two days the stations west and north of Helgoland could be worked on before a series of storms forced 6 days in Esbjerg and Cuxhaven. After returning to the investigation area the stations south and northeast of Helgoland could be processed for two more days. Afterwards, the shelters of Helgoland and Cuxhaven had to be called again for four days. After the storms had been abated, it was possible to process part of the remaining stations on three days with changing winds. The survey ended on the evening of December 19 in Cuxhaven before the next storm. The return trip to Bremerhaven took place the next day.

## **Results (Fig. 2 - 10)**

A total of 40 15 minutes and valid hauls were made using the beam trawl. At all 40 stations salinity and temperature were measured. The species composition distribution showed the usual geographic pattern with dab and sprat as the most frequent fish, followed by plaice, solenet and scaldfish. Cod was present only in very small amounts and quantities. More southern species such as anchovy were not represented. The catch of invertebrates consisted mainly of starfish, swimming crabs and whelks.

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### **Participants:**

<b>Name</b>	<b>Institution</b>
Kay Panten	TI-SF
Jana Bäger	TI-SF
Valeska Borges	TI-SF
Karin Krüger	TI-SF
Marie Rusch	TI-SF
Dimitri Schuschkow	TI-SF
Simon Wieser	TI-SF



Dipl.-Biol. K. Panten

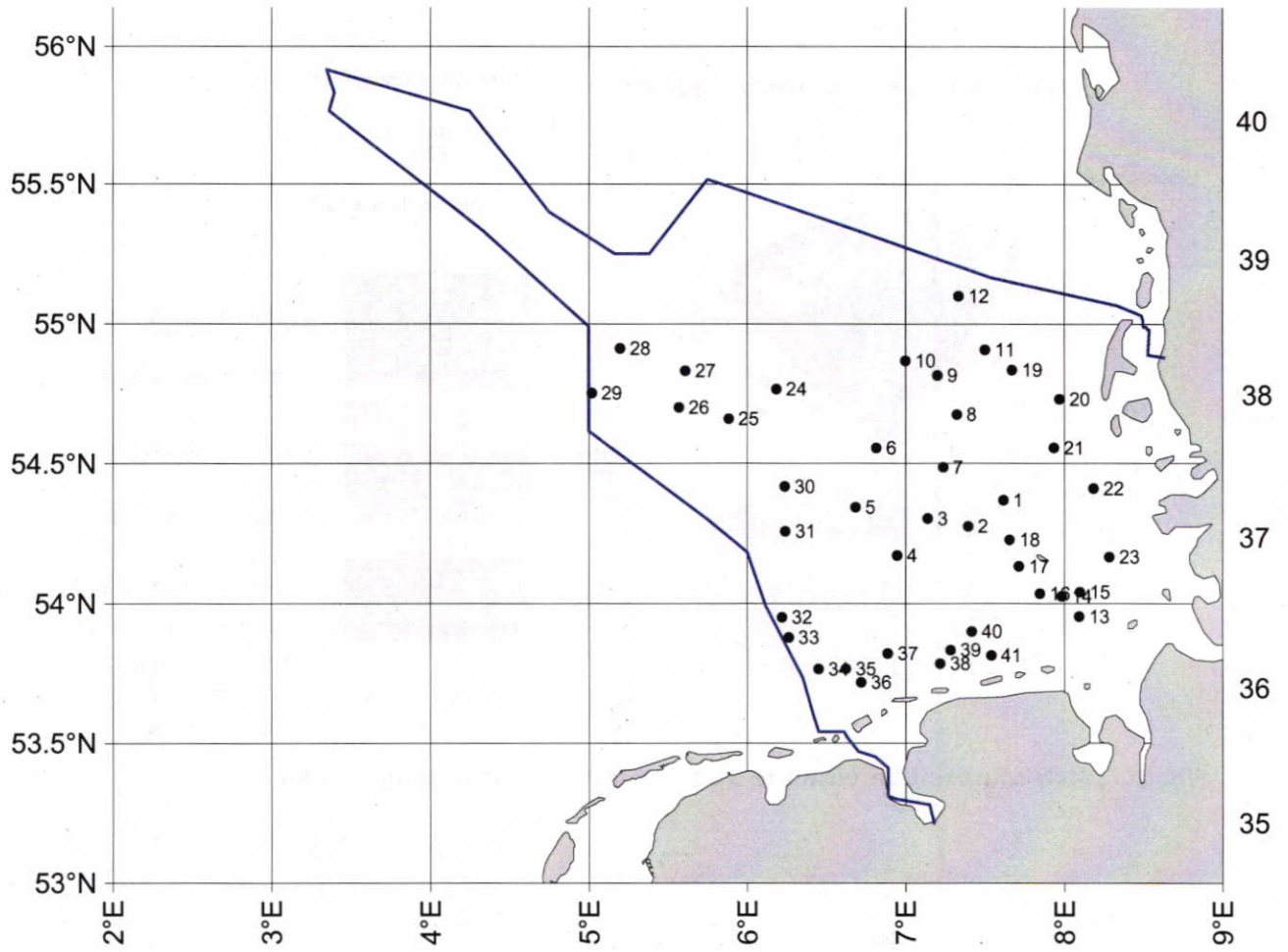


Fig. 1: "Solea", Cruise no. 771 , Haul positions and area of investigation

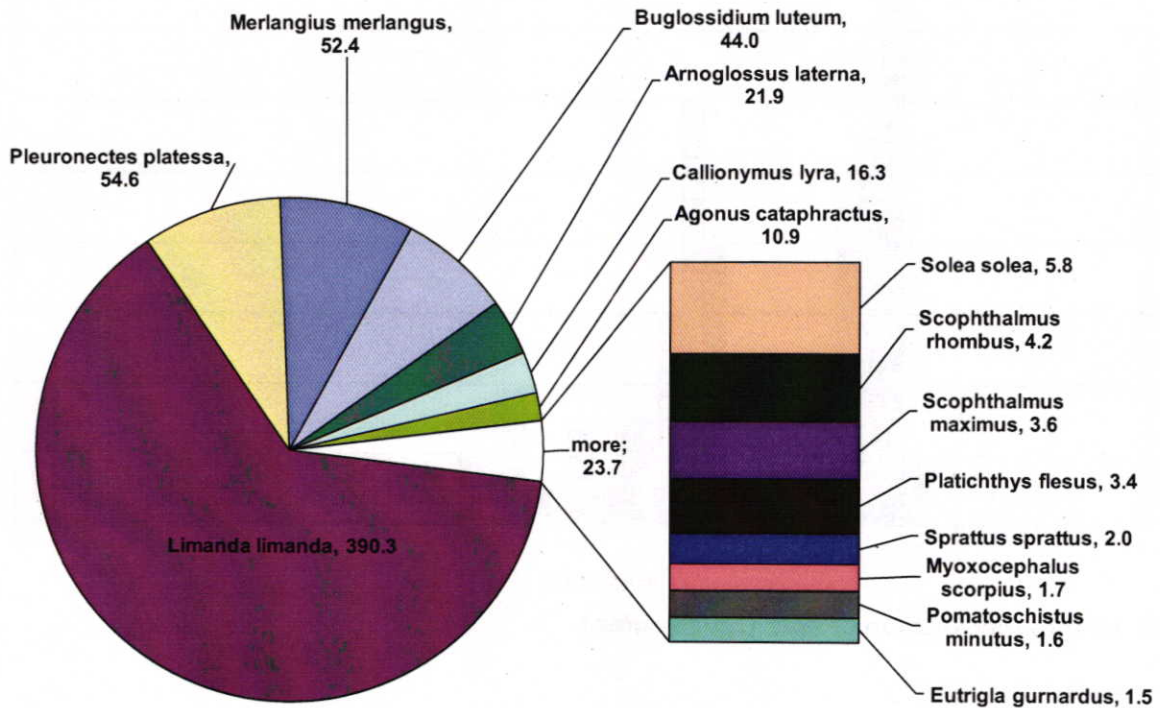


Fig. 2: Catch composition with the 15 most fish species caught in kg

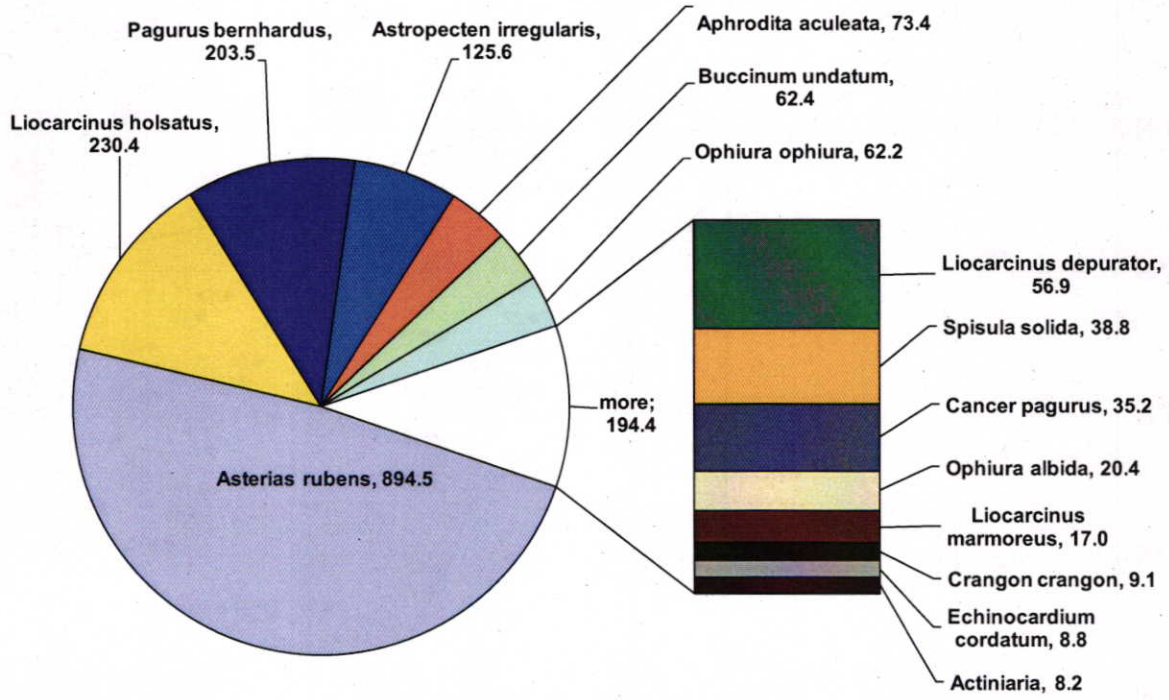


Fig. 3: Catch composition with the 15 most invertebrates caught in kg

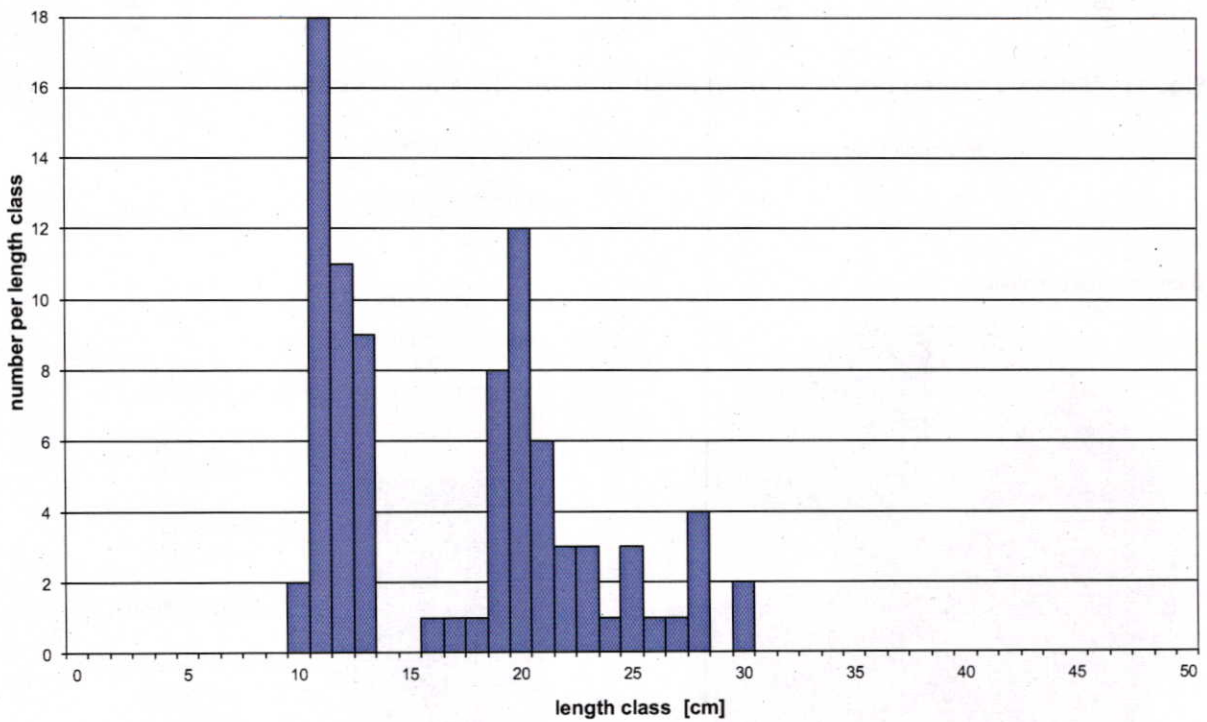
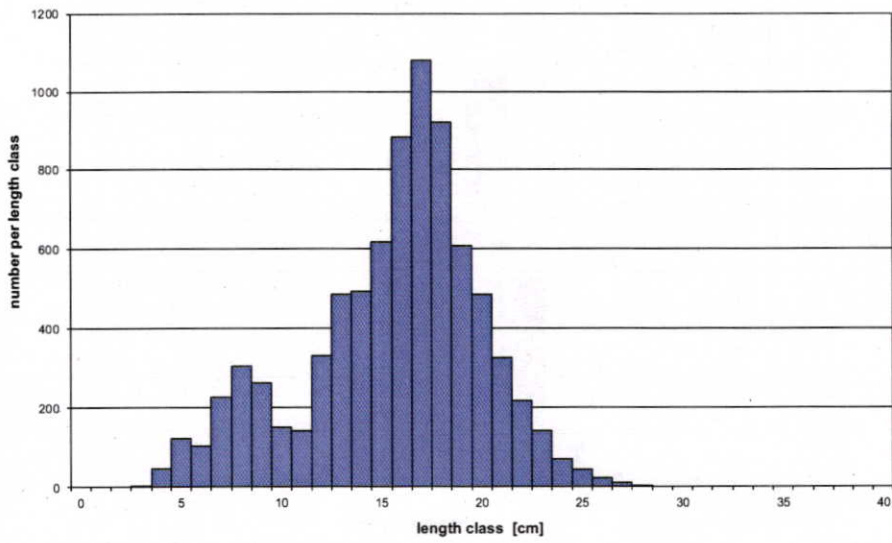
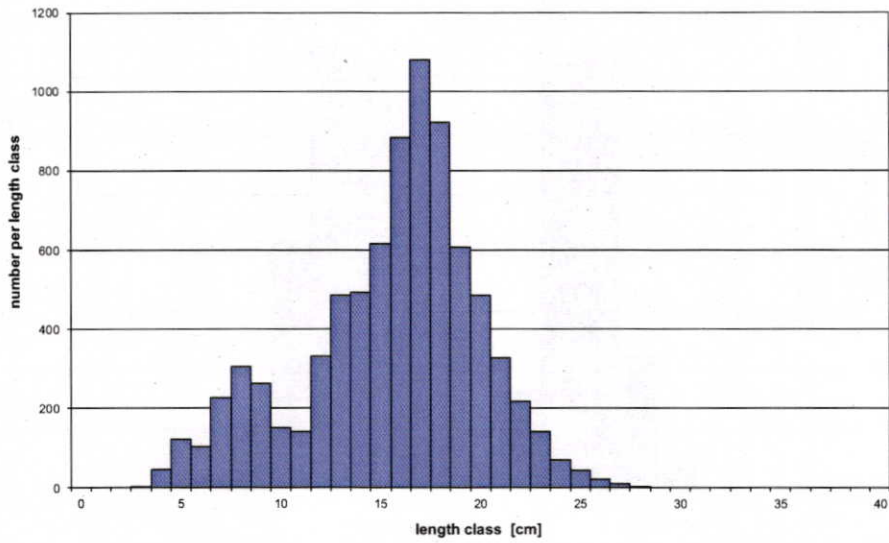


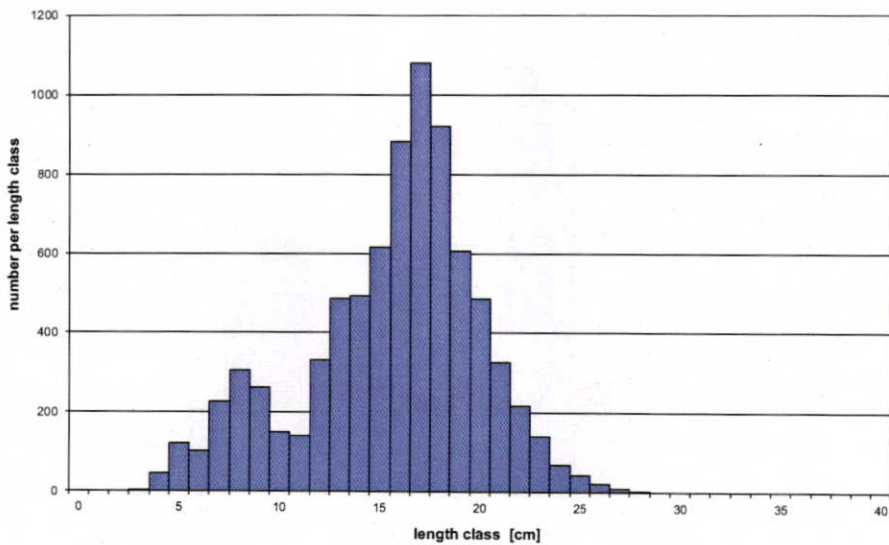
Fig. 4: Length distribution of sole (*Solea solea*)



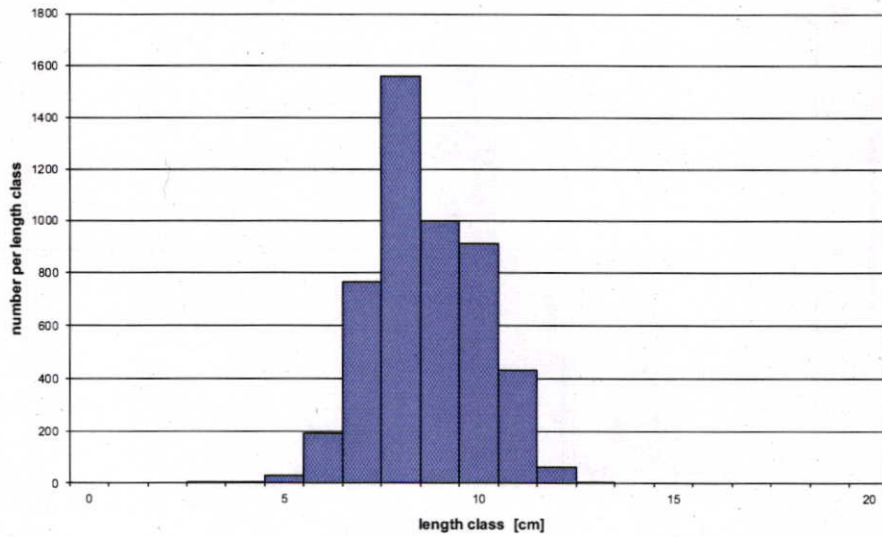
**Fig. 5: Length distribution of dab (*Limanda limanda*)**



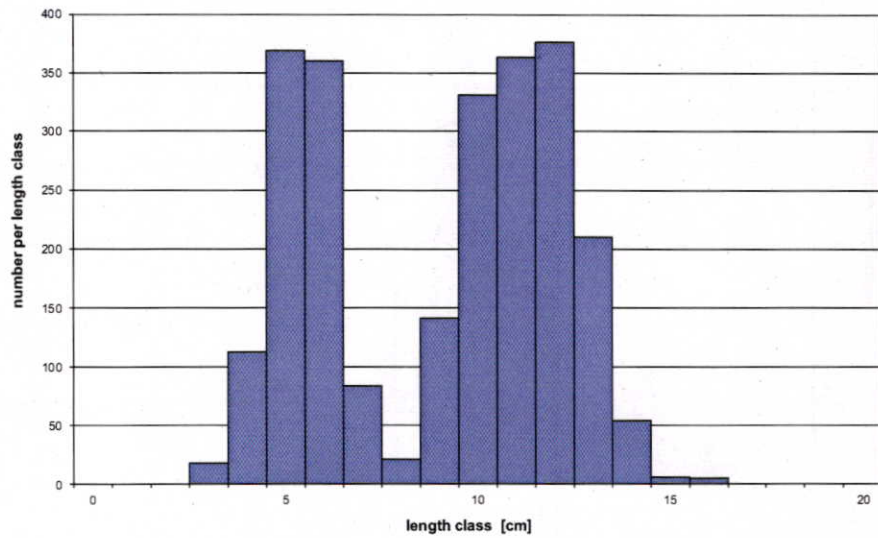
**Fig. 6: Length distribution of plaice (*Pleuronectes platessa*)**



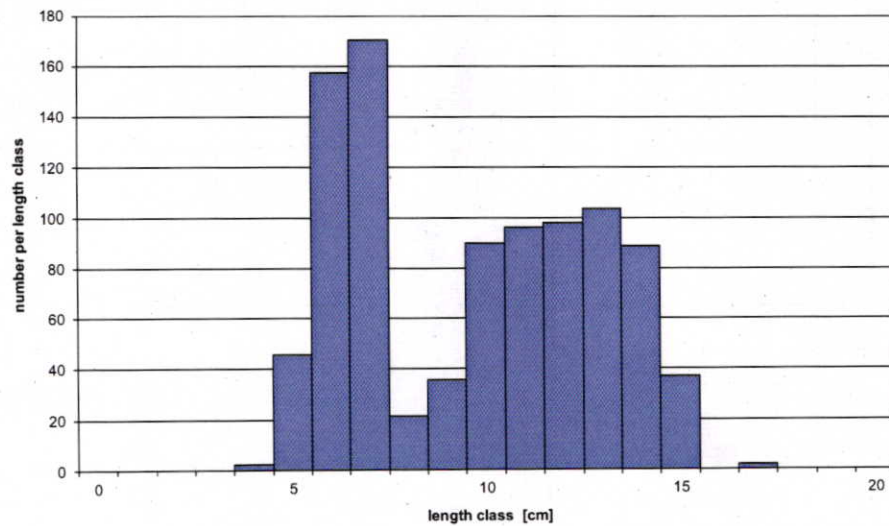
**Fig. 7: Length distribution of whiting (*Merlangius merlangus*)**



**Fig. 8: Length distribution of solenet (*Buglossidium luteum*)**



**Fig. 9: Length distribution of scaldfish (*Arnoglossus laterna*)**



**Fig. 10: Length distribution of hooknose (*Agonus cataphractus*)**