Federal Research Institute for Rural Areas, Forestry and Fisheries

## Thünen-Institute of Sea Fisheries



Herwigstrasse 31, 27572 Bremerhaven Telephone +49471 94460-101 Telefax +49471 94460-199 20.09.2018 Az.: Pa./Grie/4289

# "SOLEA" Cruise 752

# REPORT

# 20.08. - 05.09.2018

### **Personnel**

Name	Institution
Kay Panten	SF
Timo Kaminski	Multimar
Thomas Kehlert	SF
Karin Krüger	SF
Tobias Reßing	SF
Clara Scheuring	SF
Francine Vasseur	SF

### **Objectives**

- 1. Participation in the ICES co-ordinated "International Beam~Trawl~Survey'' in the North Sea
- 2. Determination of temperature and salinity in the area of investigation

### Narrative (Fig. 1)

FRV "Solea" left the port of Cuxhaven in the afternoon on 20<sup>th</sup> August. Working started the next day by sampling the ICES statistical rectangle 39F5 and 39F4. On the third day of the survey priority was given to monitoring the FFH area "Dogger Tail End". The following days the offshore stations were sampled from South to North. On the afternoon of 28<sup>th</sup> August a gale-force wind forced the stay in Hanstholm Harbour for two days. With this opportunity the representative of multimar left the ship with the up to now attained aquarium stock. On the evening of the 30<sup>th</sup> August FRV "Solea" disembarked the port and the research was continued on the next morning. Under very good weather conditions the coastal stations were sampled thereafter from North to South. In the afternoon on 2nd September the final haul of the BTS was conducted. The work in the FFH area "Sylter Außenriff" and "Borkum

Riffgrund" where carried out on 3<sup>rd</sup> and 4<sup>th</sup> September. The cruise ended in Cuxhaven in the evening on 4<sup>th</sup> September. The return trip to Bremerhaven took place the next morning.

### <u>Results (Fig. 2 – 10)</u>

A total of 63 valid hauls with a standard duration of 30 minutes were conducted with the 7m beam trawl. Additional 29 15min hauls were carried out in the FFH areas. At 72 stations salinity and temperature were measured.

The distribution of species composition shows the usual geographic pattern with dab as the most frequent fish species, followed by plaice and lemon sole (offshore) or solenette (inshore).

Toward the north and the west soon the importance of long rough dab and starry ray in the biomass increases. Still, in the survey area some larger (up to 50 cm) plaice can be found, although quite sporadically.

Also in the FFH areas, nothing unusual was caught. The fish fauna is dominated by plaice and dab in all areas. The invertebrate fauna in the coastal areas ("Borkum Riffgrund" and "Sylter Aussenriff") dominate starfish (*Asterias rubens*) and swimming crab (*Liocarcinus holsatus*). In the offshore FFH area "Dogger Tail End", sponges (*Porifera*) and hermit crabs (*Pagurus bernhardus*) are the most commonly caught invertebrates.

1 Panton

Dipl.-Biol. K. Panten

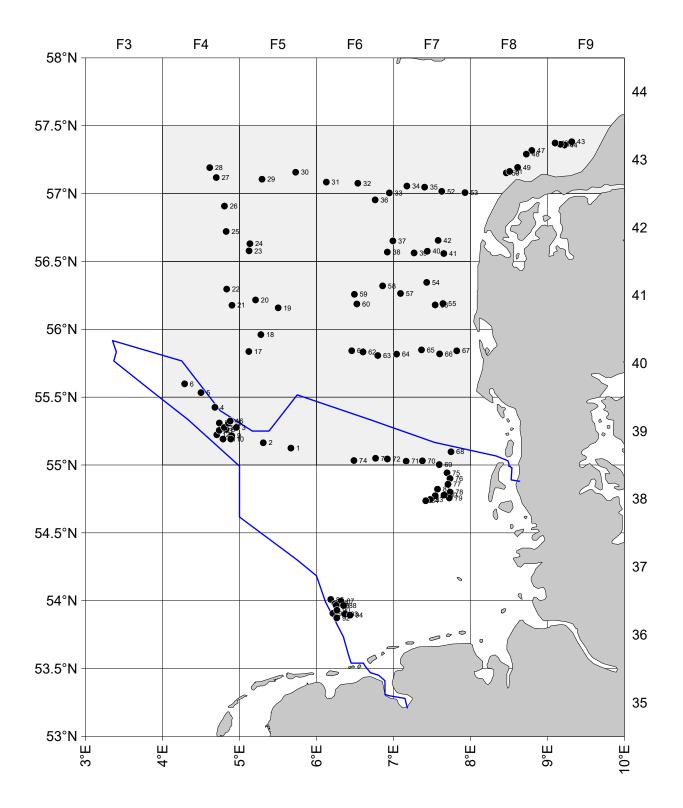
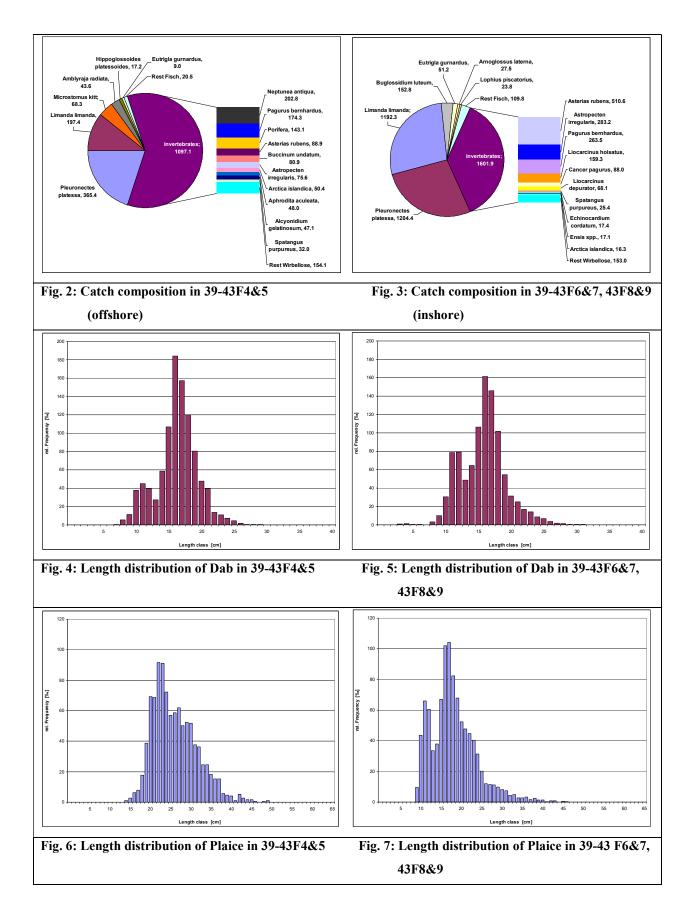
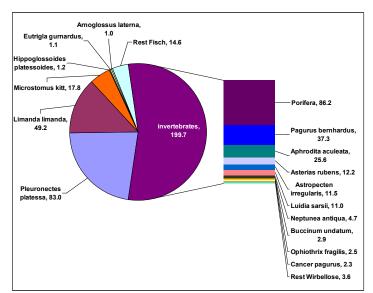


Fig. 1: "Solea", Cruise no. 752, Haul positions and area of investigation

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#### Catch composition in kg and length distribution during Beam Trawl Survey



### Catch composition and length distribution during FFH Monitoring

Abb. 8: Catch composition in FFH-Area "Dogger Tail End"

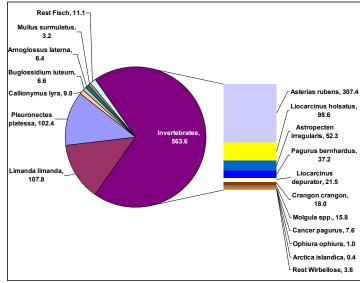


Abb. 9: Catch composition in FFH-Area "Borkum Riffgrund"

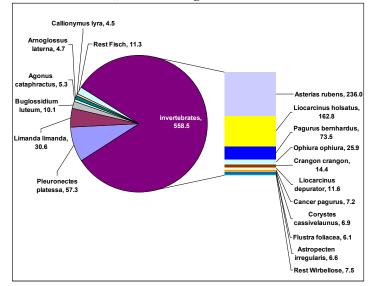


Abb. 10: Catch composition in FFH-Area "Sylter Aussenriff"

	Page 1						
	FOR COLLATIMG CENTRE USE						
CRUISE SUMMARY REPORT	Centre: DOD Ref. No.:						
	Is data exchange  restricted Yes In part No						
SHIP enter the full name and international radio call sign of the ship from which the data were collected, and indicate the type of ship, for example, research ship; ship of opportunity, naval survey vessel; etc.							
Name: <u>Solea</u> Call Si	gn: <u>DBFH</u>						
Type of ship: <u>FRV</u>							
CRUISE NO. / NAME 752	enter the unique number, name or acronym assigned to the cruise (or cruise leg, if appropriate).						
CRUISE PERIOD start (set sail) $20/08/2018$ to $05/09/2018$ end day/ month/ year (return to port)							
PORT OF DEPARTURE (enter name and country) Cuxhaven, Germany							
PORT OF RETURN (enter name and country) Cuxhaven, Germany							
<b>RESPONSIBLE LABORATORY</b> enter name and address of the laboratory responsible for coodinating the scientific planning of the cruise							
Name: <u>SF (Institut of Sea Fisheries)</u> Address: <u>Herwigstrasse 31, 27572 Bremerhaven</u> Country: <u>Germany</u>							
<b>CHIEF SCIENTIST(S)</b> enter name and laboratory of the person(s) in charge of the scienti	fic work (chief of mission) during the cruise.						
Dipl. Biol. K. Panten							
OBJECTIVES AND BRIEF NARRATIVE OF CRUISE enter sufficient information as to provide the context in	about the purpose and nature of the cruise so which the report data were collected.						
International Beam Trawl Survey							
<b>PROJECT</b> (IF APPLICABLE) if the cruise is designated as part of a larger scale cooperat of the project, and of organisation responsible for co-ordinating the project.	ive project (or expedition), then enter the name						
Project name: International Beam Trawl Survey							
Coordinating body: ICES WGBEAM							

<b>PRINCIPAL INVESTIGATORS:</b> Enter the name and address of the Principal Investigators responsible for the data collected on the cruise and who may be contacted for furtherinformation about the data. (The letter assigned below against each Principal Investigator is used on pages 2 and 3, under the column heading 'PI', to identify the data sets for which he/she is responsible)									
A. <u>D</u>	A. <u>Dipl. Biol. K. Panten</u>								
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моо	RINGS	S, BOT	том і	MOUN	TED G	BEAR /	AND DRIF	TING SYSTEMS	
Separat	e entries	should be	e made fo	or each lo	cation (or	nly deploy	ment position	d drifting systems (both surface and deep) deployed and/or recovered during the cruise. s need be given for drifting systems). This section d to routinely in order to construct 'long time series'.	
PI							DATA TYPE	DESCRIPTION Identify, as appropriate, the nature of the instrumentation the parameters (to be)	
See top of	L deg	_ATITUDI	E N/S	LC deg	ONGITUE min	E/W	enter code(s)	measured, the number of instruments and their depths, whether deployed and/or recovered, dates of deployments and/or recovery, and any identifiers given to the site.	
page.							from list on cover page.		
								Please continue on separate sheet if necessary	

#### SUMMARY OF MEASUREMENTS AND SAMPLES TAKEN

Except for the data already described on page 2 under 'Moorings, Bottom Mounted Gear and Drifting Systems', this section should include a summary of all data collected on the cruise, whether they be measurements (e.g. temperature, salinity values) or samples (e.g. cores, net hauls).

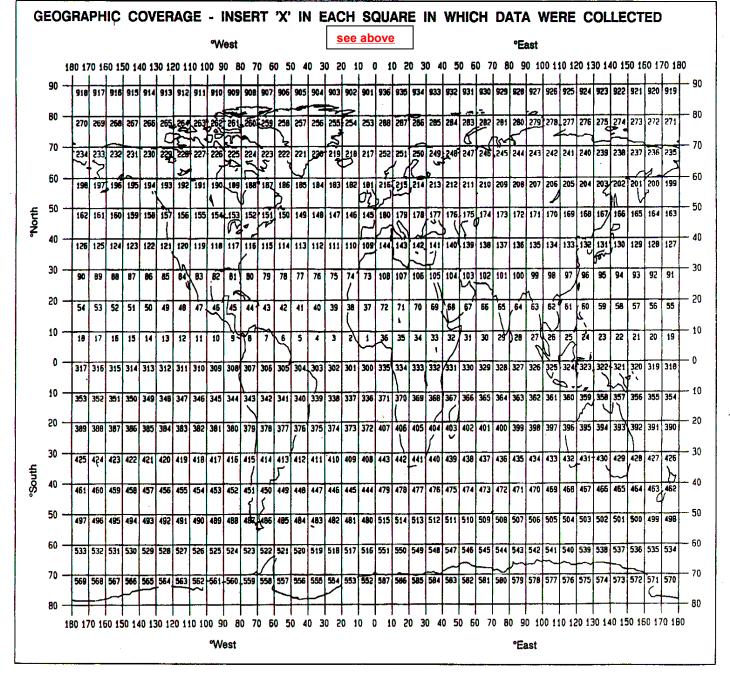
NO, UNITS : for each data set, enter the estimated amount of data collected expressed in terms of the number of 'stations'; miles' of track; 'days' of

Separate entries should be made for each distinct and coherent set of measurements or samples. Different modes of data collection (e.g. vertical profiles as opposed to underway measurements) should be clearly distinguished, as should measurements/sampling techniques that imply distinctly different accuracy's or spatial/temporal resolutions. Thus, for example, separate entries would be created for i) BT drops, ii) water bottle stations, iii) CTD casts, iv) towed CTD, v) towed undulating CTD profiler, vi) surface water intake measurements, etc.

Each data set entry should start on a new line - it's description may extend over several lines if necessary.

recording; 'cores' taken; net 'hauls'; balloon 'ascents'; or whatever unit is most appropriate to the data. The amount should be entered under 'NO' and the counting unit should be identified in plain text under 'UNITS'. DESCRIPTION UNITS ΡI NO DATA Identify, as appropriate, the nature of the data and of the instrumentation/sampling gear and list the parameters TYPE measured. Include any supplementary information that may be appropriate, e.g. vertical or horizontal profiles, depth horizons, continuous recording or discrete samples, etc. For samples taken for later analysis on shore, an indication see see see above above Enter page should be given of the type of analysis planned, i.e. the purpose for which the samples were taken. 2 code(s) from list on cover page B18 А 71 Hauls Beam Trawl Α 71 Hauls B19 Beam Trawl 66 H10 T-S-Sond profile Α Stations Please continue on separate sheet if necessary

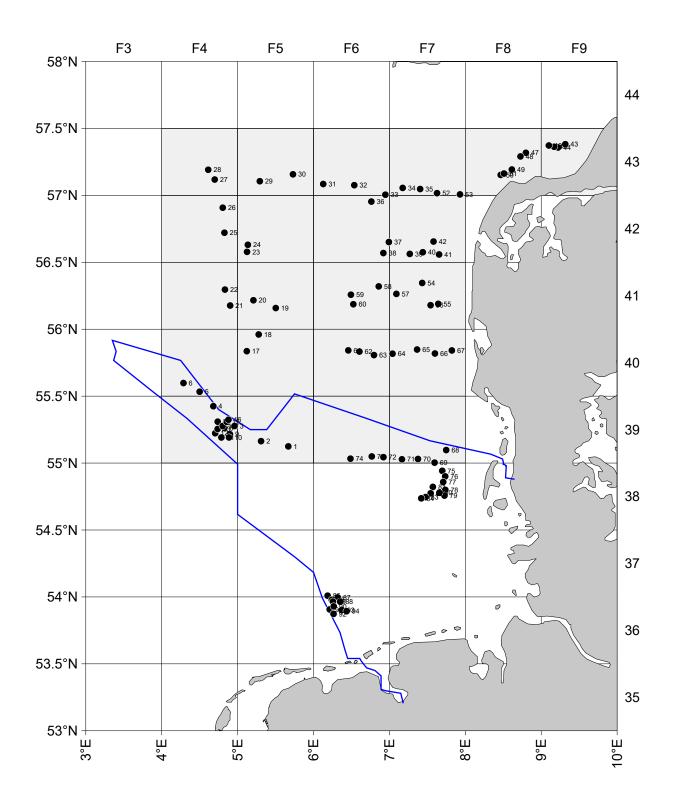
TRACK CHART: You are strongly encouraged to submit, with the completed report, an annotated track chart illustrating the route followed and the points where measurements were taken.	Insert a tick(						
<b>GENERAL OCEAN AREA(S):</b> Enter the names of the oceans and/or seas in which data were collected during the cruise – please use commonly recognised names (see, for example, International Hydrographic Bureau Special Publication No. 23, 'Limits of Oceans and Seas').							
North Sea							
SPECIFIC AREAS: If the cruise activities were concentrated in a specific area(s) of an ocean or sea, then enter a description of the area(s). Such descriptions may include references to local geographic areas, to sea floor features, or to geographic coordinates. Please insert here the number of each square in which data were collected from the below given chart 216							



#### THANK YOU FOR YOUR COOPERATION

Please send your completed report without delay to the collating centre indicated on the cover page

#### Page 4



Positions of cruise Solea 752