GEOMAR
Helmholtz-Zentrum für
Ozeanforschung Kiel

Date: 20.7.18

Cruise Report

Compiled by: Gregor Steffen, gsteffen@geomar.de

F.K. Littorina **Cruise No.: L18-09**

Dates of Cruise: 16.7. – 19.7.2018

Areas of Research: Public relations and aquarium west

shore **Port Calls: Grena/DK (17.7. – 18.7.2018)**

Institute: GEOMAR

Chief Scientist: Heidi Gonschior

Number of Scientists: 4

Projects:
Acquisition of living marine organisms for the public relations division (GEOMAR), the institute's own aquarium and the Multimar Wattforum - Tönning in the northern Kattegat.

Cruise Report

This cruise report consists of XX pages including cover:

1. Scientific crew

Name	**Function**	**Institute**	**Leg**
Heidi Gonschior	Chief scientist	GEOMAR	Complete
Gregor Steffen	Worker	GEOMAR	Complete
Simeon Choo	Student		Complete
Petra Kundid	Student		Complete
Total	**4**		

Chief scientist: Heidi Gonschior, Dorfstrasse 251, 24222 Schwentinental/Klausdorf, Germany, 0049-431-6004514, 0049-431-6001515, hgonschior@geomar.de

2. Research program

The aim of this cruise of the research vessel "Littorina" from July 16th to 19th 2018 was the sampling of living marine organisms for the public relations division (GEOMAR) and the institutes own aquarium.

Marine invertebrates and vertebrates were collected with dredges at different stations and depth in the northern Kattegat for use during "R.V. Littorina Open Ship Day 2018" and to complete scientific collections in the Kiel aquarium.

Additional depth water sampling was maintained for rearing the organisms.

3. Narrative of cruise with technical details

16.7.18	**08:35**	**Departure of RV "Littorina" from Kiel harbor**
17.7.18	**07:50**	**Arrival at the 1th station and sampling of depth water**
	08:30	**from 37m of depth**
		Salinity was 29,3 and temperature at 11,3 °C
	08:45	**First dredge at 20m of depth**
		(Dive point: 56°24.548N, 11°23.497E)
	16:00	**Finished first station after 27 dredge towings**
	17:30	**Mooring at port of Grena/ DK**
18.7.18	**07:30**	**Departing port of Grena/ DK**
	09:00	**Arriving at the 2nd station**
	09:10	**First dredge at 21m of depth**
		(Dive point: 56°25.178N, 11°20.500E)
	15:50	**Finished second station after 33 dredge towings**
	16:20	**Sampling of depth water from 35m of depth, salinity was 30 and temperature 10,0 °C**
	16:45	**Heading towards Kiel.**
19.7.18	**11:15**	**Arrival of RV "Littorina" at Kiel port**

4. Scientific report and first results

During your fieldwork the sampling results contained a wide range of marine organisms with a focus on a high salinity environment within the Baltic Sea in an area called the Kattegat. Because this area is located close to the North Sea it is characterized by a high salinity and also by a high abundance of North Sea species, which is important and very interesting for sampling cruises. An effect of the low salinity environment like existing in most parts of the Baltic Sea is that the organisms, which are mainly emigrated from the North Sea, have to cope with salinity stress. To deal with that energy demanding stress the organisms have to relocate their focus from growth processes to e.g. ion exchange processes resulting in smaller sizes compared to their species members in the salty North Sea environment. One proper way to show the public the differences in species abundance and the size to stress relationship is the public presentation of living organisms. This public relations work is done during the R.V. Littorina Open Ship day during "Schönberger Seebrücken Fest 2018". Also do we support the Kiel Aquarium with living organisms from this cruise.

To gain as many different species as possible we also dredged in various depths between 12 to 35m where the factor “light intensity” plays also a big role in benthic community composition.

5. Scientific equipment: moorings and instruments

- **Dredge**
- **Depthwater pump**
- **Salinity probe**

6. Acknowledgements

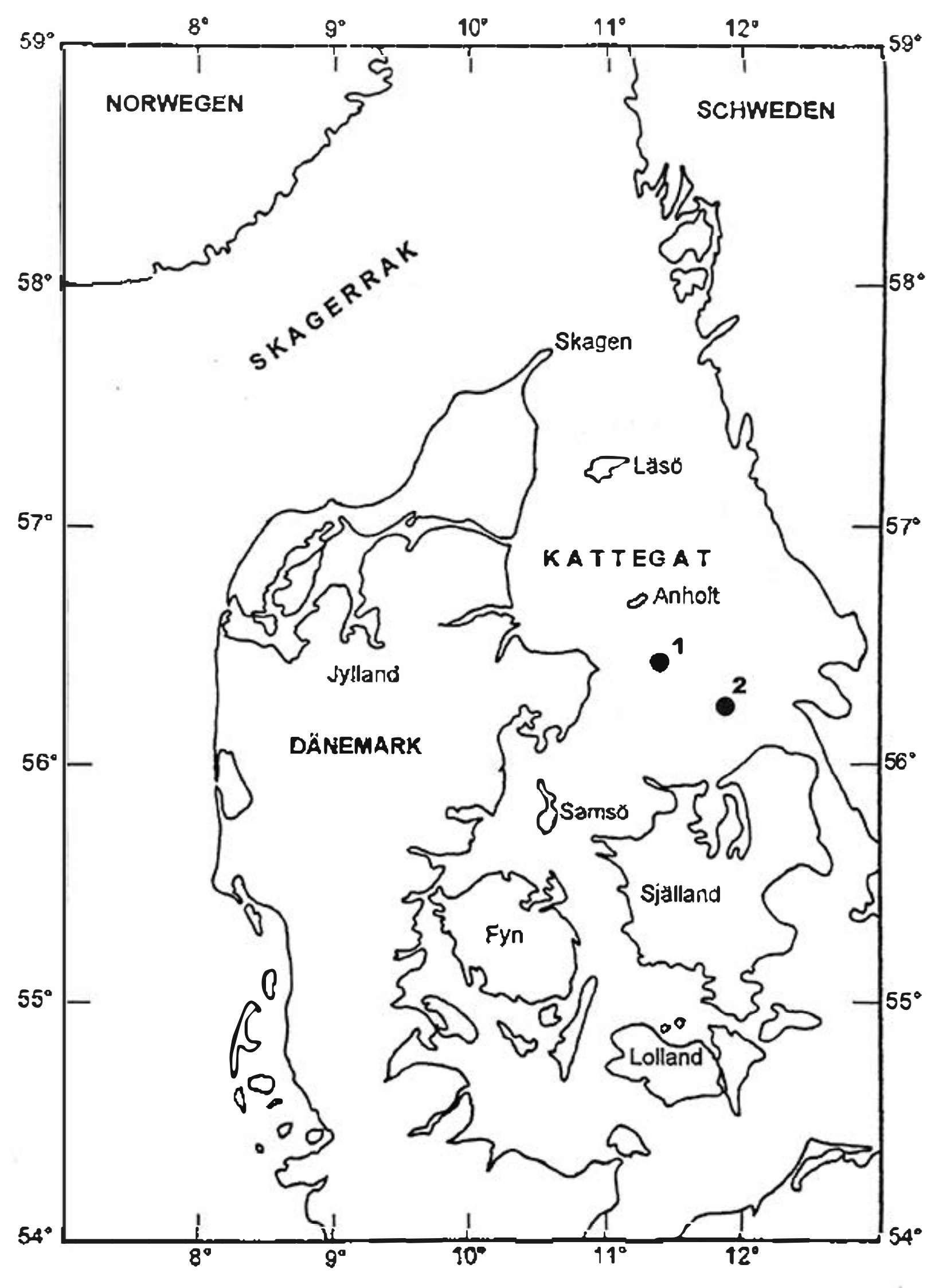
Thanks to captain and the whole Littorina crew for the big support during the trip.

7. Appendices

A. Map
B. Station list

Station list "1. dredge towing starting point":

Station 1	**56°24.548N 11°23.497E**
Station 2	**56°25.208N 11°20.500E**


8°
9°
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12°
59°
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NORWEGEN
SCHWEDEN
SKAGERRAK
Skagen
Läsö
KATTEGAT
Anholt
1
2
Jylland
DÄNEMARK
Samsö
Själland
Fyn
Lolland