

**GEOMAR
Helmholtz-Zentrum für Ozeanforschung Kiel**

Date: 27.09.2019

Cruise Report

Compiled by: Mario Finkel, mario-finkel@mail.de

F.K. Littorina

Cruise No.: L19-13

Date of cruise: 23.09. - 27.09.2019

Areas of research: Public relations and Aquarium West Shore

Port Calls: Grenå DK (24.09. - 25.09.2019 & 25.09. - 26.09.2019)

Institute: GEOMAR

Chief scientist: Heidi Gonschior

Number of scientists: 5

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 7 pages including cover:

1. Scientific crew
2. Research programme
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4. Scientific report and first results
5. Moorings, scientific equipment and instruments
6. Additional remarks
7. Appendix
 - a. Map with cruise track
 - b. Dredge position list
 - c. Station list

1. Scientific crew

Name	Function	Institute	Leg
Heidi Gonschior	Chief scientist	GEOMAR	Complete
Mario Finkel	Scientist	GEOMAR	Complete
Gianluca Breyer	Aquarium	GEOMAR	Complete
Nicole Pekruhl	Aquarium	Multimar Wattforum	Complete
Kevin Rieck	Aquarium	Multimar Wattforum	Complete
Total	5		

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

2. Research programme

The aim of this cruise of the research vessel „Littorina“ from September 23rd to September 27th 2019 was the sampling of living marine organisms for the public relations division (GEOMAR), the institute’s own aquarium and the Multimar Wattforum in Tönning.

Marine invertebrates and vertebrates were collected with dredges at different stations and depths in the northern Kattegat for use during “F.S. Alkor Open Ship Tag der Deutschen Einheit” 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

23.09.2019	09:10	Departure of RV “Littorina” from Kiel harbour
24.09.2019	07:45 until 08:20	Arrival at first station in the south-east of Læsø / DK & sampling of depth water from 30m. Salinity was 28,4 and temperature 14,8°C.
	08:45	First dredge at dive point: 57°01,1’N, 011°34,5’E
	11:40	Finished first station after 12 dredge towsings. Heading towards port of Grenå DK.
	16:40	Mooring at Grenå DK.
25.09.2019	07:30 09:05	Departing port of Grenå DK. Arrival at second station east of Grenå. First dredge at dive point: 56°24,1’N, 011°19,8’E
	15:15	Finished second station after 14 dredge towsings. Heading towards port of Grenå DK.
	17:00	Mooring at port of Grenå DK.
26.09.2019	07:30 09:30	Departing port of Grenå DK. Arrival at third station southeast of Grenå. First dredge at dive point: 56°13,1’N, 010°57,2’E
	15:40	Finished third station after 13 dredge towsings. Heading towards Kiel harbour.
27.09.2019	06:30	Arrival of RV “Littorina” at Kiel harbour

4. Scientific report and first results

During our 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 F.S. Alkor Open Ship “Tag der Deutschen Einheit” at the Westufer in Kiel and in the Kiel Aquarium.

To gain as many different species as possible we also dredged in various depths between 15 to 26m where the factor “light intensity” plays also a big role in benthic community composition.

5. Moorings, scientific equipment and instruments

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

6. Acknowledgements

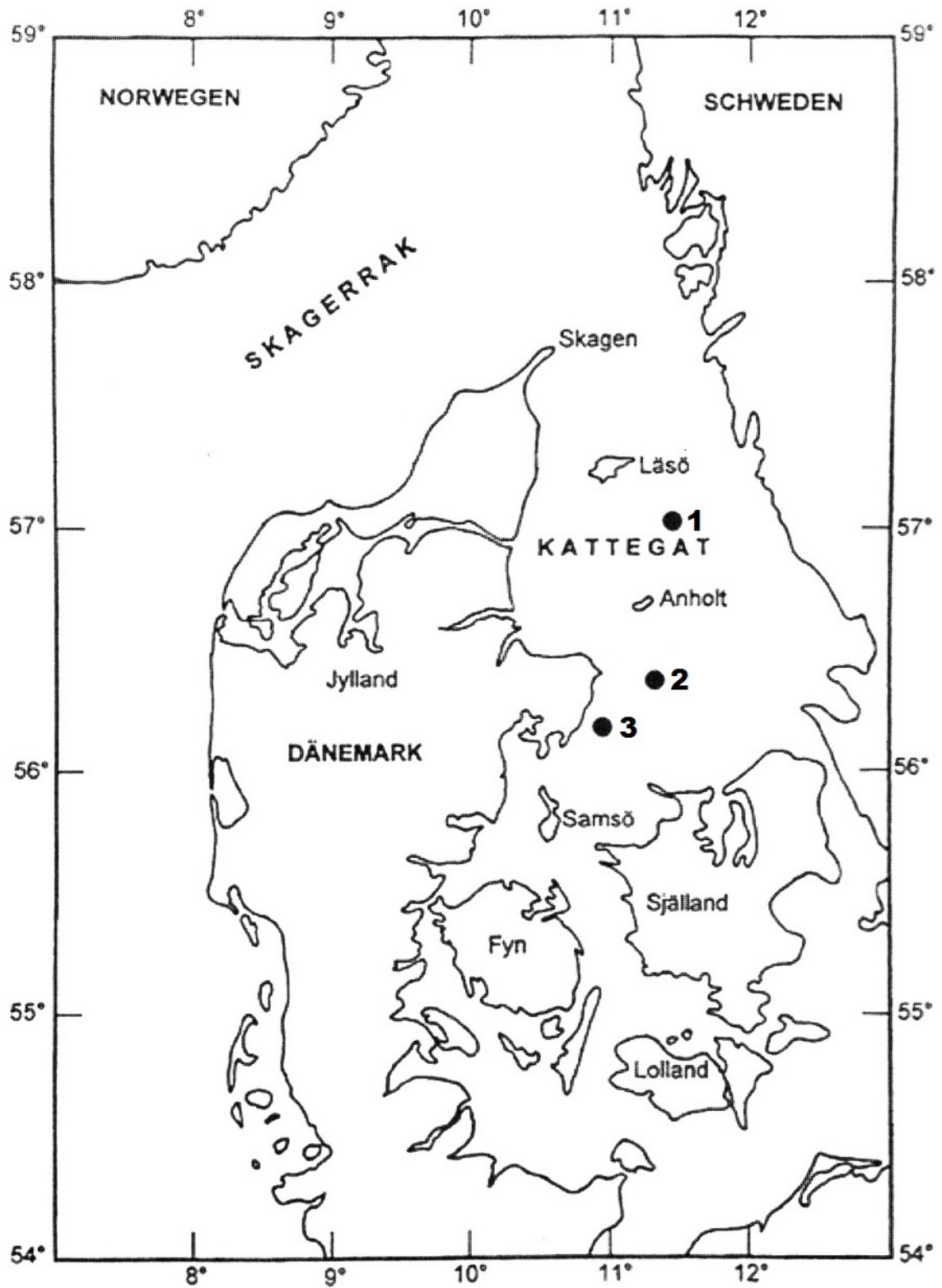
Thanks to the captain and the whole Littorina crew for the big support during the trip.

7. Appendix

- a. Map
- b. Dredge position list
- c. Station list

Map

Map:



Dredge position list:

Station 1 (24.09.2019):

Dredge#	Time	Start coordinates	
1	08:45	57°01,1'N	011°34,5'E
2	09:00	57°01,1'N	011°35,2'E
3	09:10	57°01,1'N	011°35,7'E
4	09:25	57°01,1'N	011°36,2'E
5	09:40	57°01,0'N	011°35,5'E
6	10:00	57°01,1'N	011°34,7'E
7	10:15	57°01,1'N	011°35,5'E
8	10:30	57°01,0'N	011°36,0'E
9	10:40	57°01,0'N	011°35,4'E
10	10:55	57°00,9'N	011°35,0'E
11	11:10	57°00,5'N	011°34,7'E
12	11:25	57°00,3'N	011°34,8'E

Station 2 (25.09.2019):

Dredge#	Time	Start coordinates	
1	09:10	56°24,1'N	011°19,8'E
2	09:25	56°24,2'N	011°20,4'E
3	09:40	56°24,3'N	011°21,0'E
4	10:00	56°24,4'N	011°21,3'E
5	10:15	56°24,2'N	011°20,6'E
6	10:30	56°24,1'N	011°20,1'E
7	10:45	56°23,9'N	011°19,8'E
8	11:00	56°24,2'N	011°20,1'E
9	11:12	56°24,3'N	011°20,8'E
10	13:44	56°24,5'N	011°21,2'E
11	14:05	56°24,3'N	011°20,6'E
12	14:20	56°24,4'N	011°21,2'E
13	14:40	56°24,2'N	011°20,5'E
14	15:00	56°24,4'N	011°21,1'E

Station 3 (26.09.2019):

Dredge#	Time	Start coordinates	
1	09:25	56°13,1'N	010°57,2'E
2	09:45	56°13,1'N	010°56,0'E
3	10:00	56°13,1'N	010°55,2'E
4	10:15	56°13,1'N	010°55,9'E
5	10:35	56°13,1'N	010°56,8'E
6	10:55	56°13,0'N	010°57,1'E
7	12:45	56°08,7'N	011°09,1'E
8	13:05	56°09,0'N	011°10,1'E
9	13:25	56°08,8'N	011°10,2'E
10	13:40	56°09,0'N	011°09,4'E
11	14:03	56°08,7'N	011°10,1'E

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12	14:30	56°08,6'N	011°10,2'E
13	14:55	56°08,8'N	011°09,8'E

Station list:

Station 1	57°01,1'N, 011°34,5'E
Station 2	56°24,1'N, 011°19,8'E
Station 3	56°13,1'N, 010°57,2'E