

Cruise Report

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F.K. Littorina

Cruise No.: L14-06

Dates of Cruise: 16.6. – 20.6.2014

Areas of Research: Public relations and aquarium west shore

Port Calls: Frederikshavn, Osterby/Laeso (17.6. – 18.6.2014)

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 XX pages including cover:

1. Scientific crew
2. Research programme
3. Narrative of cruise with technical details
4. Scientific report and first results
5. Moorings, scientific equipment and instruments
6. Additional remarks
7. Appendix.
 - A. Map with cruise track
 - B. Station list

2. Research program

The aim of this cruise of the research vessel “Littorina” from June 16th to 20th 2014 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 “F.S. Alkor Open Ship Day 2014” 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

16.6.14	08:45	Departure of RV “Littorina” from Kiel harbor
17.6.14	09:45	Arrival at the 1th station in the northern of Læsø
	10:00	Sampling of depth water from 26m of depth Salinity was 31,8 and Temperature at 14.7 °C
	10:45	First dredge at 25m of depth (Dive point: 57°27.195N, 11°18.480E)
	15:25	Finished first station after 25 dredge towings
	16:30	Mooring at port of Osterby (Læsø)
18.6.14	08:30	Departing port of Osterby
	10:10	Arriving at the 2nd station
	10:15	First dredge at 34m of depth (Dive point: 57°10.933N, 11°30.861E)
	11:15	Finished second station after 5 dredge towings
	11:50	Arriving at the 3rd station
	11:55	First dredge at 24m of depth (Dive point: 57°06.647N, 11°33.748E)
	13:00	Finished third station after 5 dredge towings
	13:40	Arriving at the 4th station
	13:45	First dredge at 26m of depth (Dive point: 57°01.270N, 11°34.470E)
	16:45	Finished 4th station after 20 dredge towings Heading towards anchorage in the southwest of Anholt
	20:45	Anchor down at station 5
19.6.14	07:30	Bad weather with strong winds (Wind intensity 7, blast 8) Rest of the cruise work is cancelled , heading towards Kiel.

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. Alkor Open Ship day during the Kiel Week 2014, in the Kiel Aquarium and also in the Multimar Wattforum, which we supported 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 Detlef Korte and the whole Littorina crew for the big support during the trip.

7. Appendices

- A. Map
- B. Station list

Station list:

Station 1	57°27.195N; 11°18.480E
Station 2	57°10.933N; 11°30.861E
Station 3	57°06.647N, 11°33.748E
Station 4	57°01.270N, 11°34.470E