

Cruise AL499 Work Program Report – Week 2

Sunday 20.8.2017

Afternoon After an interesting stopover in Gdynia with visits to the Aquarium and its backstage facilities and an interesting lunch break with Dr. Piotr Margonski, elected Vice President of the International Council for the Exploration of the Seas (ICES) and Senior Scientist at the National Marine Fisheries Research Institute, Poland (NMFRI) as well as arrival of Sirin Schulz from the GEOMAR PR Department Alkor departed from Gdynia. We are especially happy that Sirin actively disseminated our research results to the broad public during the cruise (<http://www.oceanblogs.org/oceannavigator/>).

Next stations are selected in the Gotland Basin to cover physical, chemical and biological properties of the major Baltic Sea basins which are characterized by different oxygen, salinity and seasonality.

Monday 21.8 – Wednesday 23.8.2017

Station work on selected stations (Fig. 1) in the Gotland Basin and off western Gotland were conducted similar to previous work in the SW and Southern Baltic Sea during leg 1. Unfortunately, the weather situation permitted visits of northern Stations off Finland due to heavy winds from NNE. However, this allowed and freed time to do an in depth investigation of vertical depth distribution of macrozooplankton in the Bornholm Basin, applying different tools such as the VPR (Video Plankton Recorder) in combination with a multiple opening and closing net (Multinet Maxi) to resolve fine scale accumulation pattern at thin layers. Among the different questions addressed by this intensive sampling scheme at the a selected Bornholm Basin Station, the aim of this investigation has been to examine where the arctic relict comb jelly *Mertensia ovum* is located in relation to physical water column properties. So far it is only known that *M. ovum* is located below the thermocline during summer months (Jaspers *et al.*, 2013). Our results are envisioned to resolve this in higher detail.

Thursday 24.8 – Friday 25.8.2017

Continuation of Station work off Rügen and in the Arkona Basin (Fig. 1) with special emphasis on the vertical depth distribution of macrozooplankton. After finishing station work in the Arkona Basin, steaming back towards Kiel. Arrival in Kiel East shore for unloading and loading of new equipment for AL500, 22 hours before planned arrival since station work in all regions has been conducted and time was saved as the weather situation permitted to visit northern most stations off Finland and eastern stations in the Gotland Basin during leg 2.

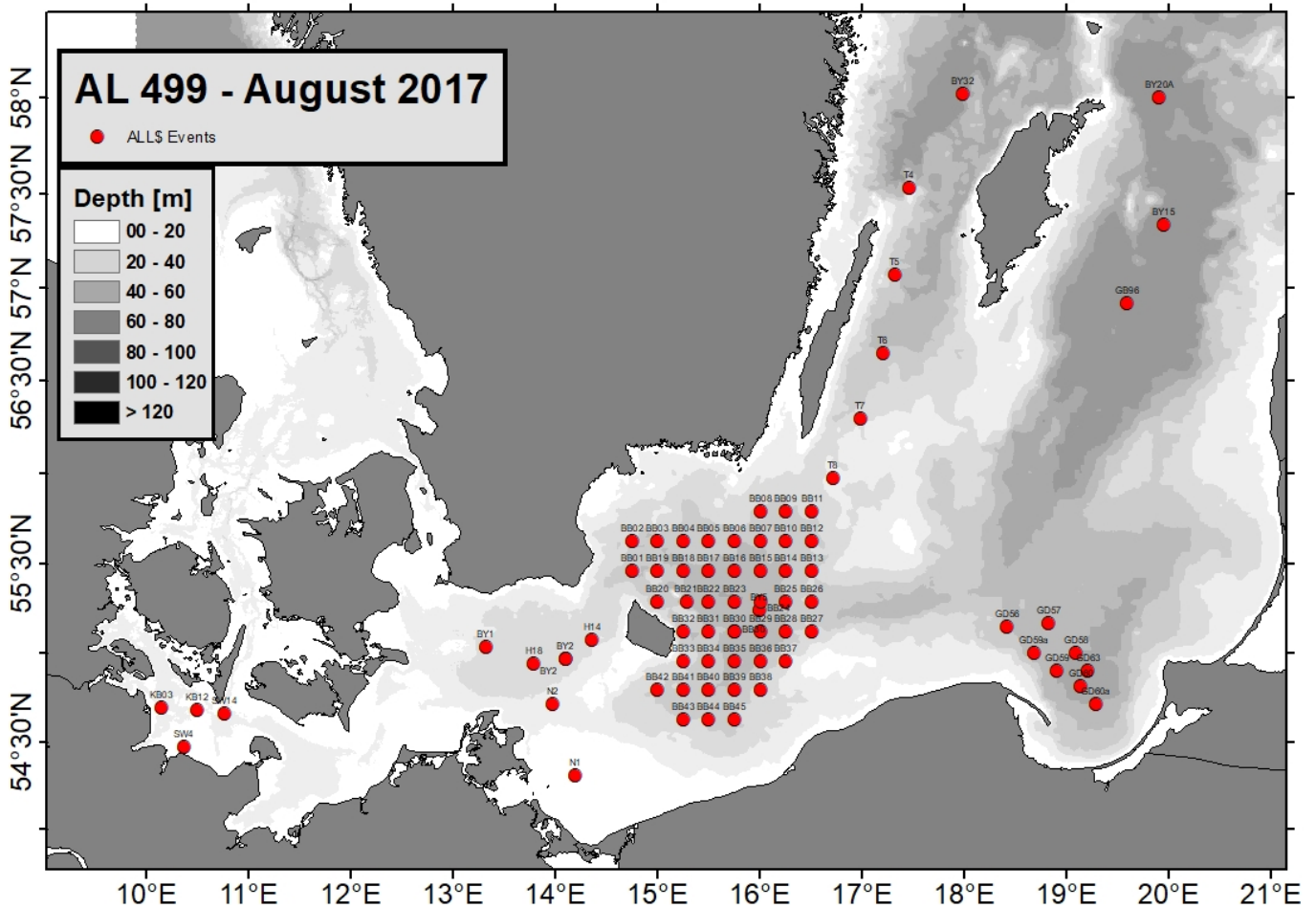


Fig. 1: Station map with all stations covered during leg 1 and leg 2 of AL499

Work program results:

In total we have quantified 2500 gelatinous macrozooplankton organisms, collected ca. 450 cod larvae plus several clupeids and covered more than 75 Stations which were resolved in up to 18 depth strata. Those samples are essential for continuation of ongoing monitoring activities and will contribute to several EU and DFG projects with data and results such as BIOC3, SFB1182, Future Ocean, Marie Curie (CJ).

Written by: Dr. Cornelia Jaspers, Chief Scientist

References:

Jaspers C, Haraldsson, M, Lombard, F, Bolte, S, Kiørboe, T (2013) Seasonal dynamics of early life stages of invasive and native ctenophores give clues to invasion and bloom potential in the Baltic Sea. *Journal of Plankton Research*, **35**, 582-594.