Environmental
Protection
Agency

Cruise report

R/V VĖJŪNAS
Cruise No. 15/V4 (3-4)

Date 2015.10.19-20

Environmental Protection Agency Marine Research Department
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GENERAL INFORMATION

1. Name of research vessel: **VĖJŪNAS**

2. Dates of cruise and cruise No.:
   19th October 2015 – 15/V4(3)
   20th October 2015 – 15/V4(4)

3. Operating Authority:
   Environmental Protection Agency Marine Research Department
   Taikos avenue 26, LT-91222, Klaipeda, Lithuania
   Phone: +370 46 410 450
   Fax: +370 46 410 460

4. Owner: Environmental Protection Agency

5. Particulars of ship:

Table 1. Particulars of ship

Name	VĖJŪNAS
Year of building	2012 m.
Water capacity	424 m^3
Length	23,90 m
Width	8 m
Draught	1,30 m
Average speed	11 knots
Call sign	LYTN
IMO Nr.	9640346

6. Crew:
   Name of captain: Gintautas Morkevičius + 4 crew members.

7. Scientific personal

Table 2. Scientific personal

1.	Vitalijus Malejevas	Hydrologist
2.	Ignas Vyšniauskas	Hydrologist
3.	Paulius Petrošius	Hydrologist
4.	Ovidijus Stulpinas	Hydrologist
5.	Violeta Jančauskienė	Chemist
6.	Ernesta Butiškytė	Chemist
7.	Eglė Šupinienė	Biologist
8.	Grasilda Gudžiūnaitė	Biologist
9.	Sabina Solovjova	Biologist

BRIEF DESCRIPTION OF THE CRUISE

Aim of the cruise – collection of factual information about meteorological, hydrological, hydrochemical and biological state of the Baltic Sea according to the 2015 monitoring plan, which is based on National environment monitoring program of 2011-2017 (http://gamta.lt).

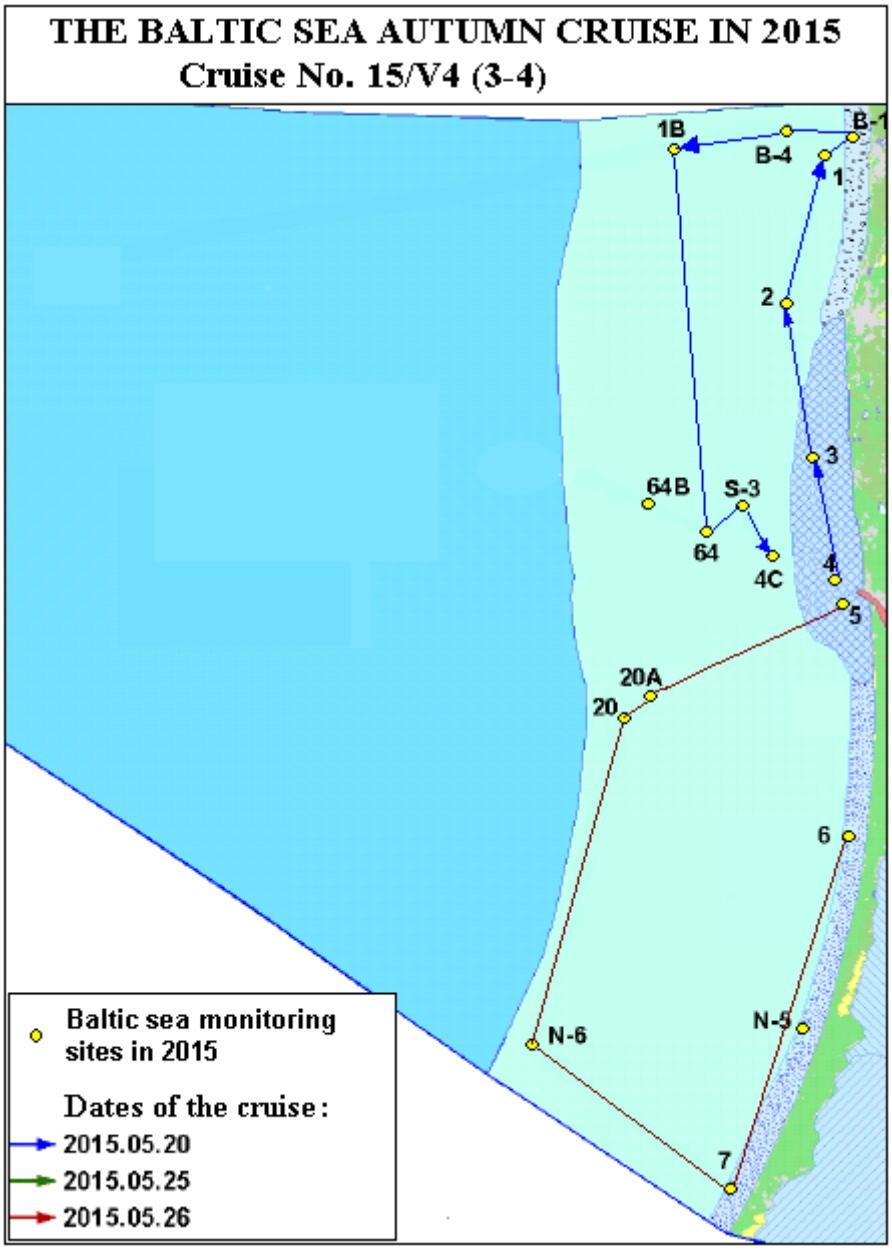

Fig. 1 Routes of the cruise

General information (used equipment)

During the cruise, we used water sampling system “Hydro - Bios" PRS 12, Sea & Sun probe CTD 90 (fig. 2), meteorological station MAWS 420, Secchi disk, Van Veen grab (0,1 m^2, 71 kg), the integrated sampler “Hydro-Bios” to take samples in vertical layer from the water surface to 10 m depth, modified Zobel bathometer for bacterioplankton sampling.

Fig. 2 Probe CTD 90

Table 3. Quantity of taken samples during the cruise

Monitoring station No.	Coordinates of monitoring station		Date and time, UTM	Depth	Hydrodinamic regime		Physico-chemical quality elements									Artificial radionuclides		Biological quality elements			
							Hydrometeorological elements	General data		Other elements	Specific pollutants in water				Specific pollutants in sediments						
	Longitude	Latitude			Currents	Waves		Water temperature, salinity	O_2, pH, nutrients	Suspended materials	Detergents	Oil hydrocarbons	Heavy metals, Hg	Pesticides,, VOC, PAA, phtalats, phenols		In water	In bottom sediments	Phytoplankton	Chlorophyll „a“	Zooplankton	Bacterioplankton
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
4	21°03.0’	55°44.1’	2015-10-19 6:40	17	-	1	1	4	3	-	2	2	2	1	1	-	-	1	4	-	2
3	21°01.0’	55°49.0’	2015-10-19 7:50	18	-	1	1	4	3	-	-	2	-	-	-	-	-	1	4	-	-
2	20°58.5’	55°55.5’	2015-10-19 8:55	18	-	1	1	4	3	-	2	2	2	-	-	-	-	1	2	-	-
1	21°01.0’	56°01.7’	2015-10-19 10:00	16	-	1	1	4	3	-	2	2	2	-	-	-	-	-	2	-	-
B-1	21°03.0’	56°02.5’	2015-10-19 10:30	12	-	1	1	3	2	2	2	2	2	-	1	-	-	-	2	-	2
B-4	20°58.1'	56°02.7'	2015-10-19 11:20	20	-	1	1	4	3	2	-	-	-	-	1	-	-	1	2	-	2
1B	20°50.0’	56°01.7’	2015-10-19 12:25	27	-	1	1	5	4	-	-	2	2	1	1	-	-	1	5	-	-
64	20°53.5’	55°45.9’	2015-10-19 14:55	34	-	1	1	6	5	-	-	2	-	-	1	-	-	1	5	-	-
S-3	20°56.0’	55°47.0’	2015-10-19 15:40	29	-	1	1	5	4	2	2	2	2	-	1	-	-	1	2	-	-
4C	20°58.4’	55°45.0’	2015-10-19 16:25	27	-	1	1	5	-	-	-	-	-	-	-	-	-	-		-	-
5	21°03.7’	55°43.1’	2015-10-20 6:30	15	-	1	1	4	3	2	-	2	-	-	1	-	-	1	4	-	-
20A	20°50.0’	55°39.0’	2015-10-20 7:50	43	-	1	1	6	5	2	-	-	-	-	1	-	-	-	2	-	-

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
20	20°48.0’	55°38.0’	2015-10-20 8:30	46	-	1	1	7	2	2	2	2	2	1	1	1	1	1	2	-	-
N-6	20°42.4’	55°24.3’	2015-10-20 10:40	36	-	1	1	6	2	-	-	2	-	-	1	-	-	1	2	-	-
7	20°57.4’	55°18.7’	2015-10-20 12:15	14	-	1	1	4	3	-	2	2	2	1	1	-	-	1	4	-	2
6	21°04.7’	55°33.5’	2015-10-20 14:30	13	-	1	1	3	2	-	2	2	2	-	1	1	1	1	4	-	-

Numbers represents in which horizons samples were taken and measurements were carried out.

BRIEF REVIEW

Hydrometeorological conditions

During autumn expedition easterly wind ranged from 4 to 9 m/s. The waves were 0,5 - 1,0 m high. Air temperatures varied from 6 to 9 °C and a relative humidity ranged from 82 to 99 %. Visibility was 2 - 20 km. During the expedition dominated 7 - 9 scores *Stratocumulus, Cumulus* clouds.

Hydrological observations

Water temperature. Surface water temperature ranged from 9,9 °C (at Būtingė) to 13,4 °C (in the western part of Klaipėda oceanographic section) during autumn expedition in the Baltic Sea. The minimum water temperature (6,0 °C) was measured in the bottom water layer of investigated south-western observed area.

Water salinity. Sea surface salinity ranged from 6,6 ‰ (about 4 miles from Klaipėda sea port gates) to 7,4 ‰ (in sea landfill) during autumn expedition in the Baltic Sea. Water salinity increased with the depth, reaching the maximum (7,7 ‰) in the bottom water layer of investigated western aquatory part.

Water transparency. During seasonal autumn expedition water transparency was much more transparent then during summer expedition. Water transparency varied from 2,5 m (near Klaipėda sea port gate) to 8 m in the western part of the studied water area.

Hydrochemical and biological observations

During the expedition collected samples were transported to the shore laboratory where the investigations were carried out. The results will be presented to the Environment integrated management information system (AIVIKS).