



**International Summer School on Bryozoa:
diversity and evolutionary trends in colonial animals**



PRELIMINARY PROGRAMME
18th - 31th of August, 2018

**Educational and Research Station „Belomorskaia“ (St Petersburg State University)
Srednii Island, Kandalaksha Bay, White Sea, Russia**

Actual timetable will depend on station schedule, weather and tides.

Day 1 - 17 August 2018	
17.30 – 18.00	arriving
19.00 – 20.00	<i>Dinner</i>
20.00	Welcome/information, Safety instructions, Tour of the station

Day 2 – 18 August 2018	
Introduction to Gymnolaemata part I& Animal collection	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Gymnolaemata: Cheilostomata (morphology)
12:00 – 14:00	Practical session: Gymnolaemata: Cheilostomata(morphology)
14.00 – 16.00	<i>Lunch</i>
16.00 – 19.00	Field trip(row boats): Animal collection
19.00 – 20:00	Sample sorting
20:00-21:00	<i>Dinner</i>
21:00	Welcome lecture – History of Sredniy Island and Educational and Research Station „Belomorskaia“ Welcome party

Day 3 – 19 August 2018	
Introduction to Gymnolaematapart II	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Gymnolaemata: Ctenostomata (morphology)
12:00 – 14:00	Practical session: Gymnolaemata: Ctenostomata(morphology)
14.00 – 16.00	<i>Lunch</i>
16.00 – 19.00	Practical session: Gymnolaemata(work with live material)
19.00 – 20:00	Presentations from 5 participants, 10 min each
20:00-21:00	<i>Dinner</i>

Day 4 – 20 August 2018	
Animal collection&Introduction to Stenolaemata	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 14:00	Field trip (dredging; ship)
14.00 – 16.00	<i>Lunch</i>
16.00 – 18.00	Lecture: Stenolaemata(morphology)
18.00 – 20:00	Practical session: Stenolaemata(morphology)
20:00-21:00	<i>Dinner</i>

Day 5 – 21 August 2018	
Polymorphism & Identification (Gymnolaemata)	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Polymorphism
12:00-14:00	Practical session: polymorphism, part 1
14.00 – 16.00	<i>Lunch</i>
16.00 – 19.00	Practical session: Gymnolaemata, part I (identification, drawings)
19.00 – 20:00	Presentations from 5 participants, 10 min each
20:00-21:00	<i>Dinner</i>

Day 6 – 22 August 2018	
Identification (Gymno- and Stenolaemata)	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 14:00	Practical session: Gymnolaemata, part II (identification, drawings)
14.00 – 16.00	<i>Lunch</i>
16.00 – 19.00	Practical session: Stenolaemata (identification, drawings)
19.00 – 20:00	Presentations from 5 participants, 10 min each
20:00-21:00	<i>Dinner</i>

Day 7 – 23 August 2018	
day off	Ship trip to one of the islands (depending on the weather), BBQ

Day 8 – 24 August 2018	
Introduction to Phylactolaemata & Animal collection	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Phylactolaemata(morphology)
12:00 – 14:00	Practical session: Phylactolaemata (morphology)
14.00 – 16.00	<i>Lunch</i>
16.00 – 19.00	Field trip (ship, Letnyaya): Animal collection
19.00 – 20:00	Sample sorting
20:00-21:00	<i>Dinner</i>

Day 9 – 25 August 2018	
Work with live material & Reproduction	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 14:00	Work with live material
14.00 – 16.00	<i>Lunch</i>
16.00 – 18.00	Lecture: Reproduction: gametogenesis, embryogenesis, brooding
18.00 – 20:00	Practical session: diversity of brooding organs
20:00-21:00	<i>Dinner</i>

Day 10 – 26 August 2018	
Embryonic& postembryonic development	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Embryonic and postembryonic development of Gymnolaemata
12.00 – 14.00	Field trip (row boats): plankton sampling
14.00 – 16.00	<i>Lunch</i>
16:00 – 18:00	Practical session: larval types in Gymnolaemata
18.00 – 19:00	Lecture: Embryonic and postembryonic development of Stenolaemata
19.00 – 20:00	Practical session: postembryonic development in Stenolaemata
20:00-21:00	<i>Dinner</i>

Day 11 – 27 August 2018	
Embryonic& postembryonic development	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Larvae settlement and metamorphosis
12.00 – 14.00	Practical session: larval settlement – experimental design
14.00 – 16.00	<i>Lunch</i>
16.00 – 18:00	Lecture: Postembryonic development and budding in Phylactolaemata
18.00 – 20:00	Practical session: budding in Phylactolaemata
20:00-21:00	<i>Dinner</i>

Day 12 – 28 August 2018	
Bryozoan distribution & competition in fouling communities	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Ecology: factors affecting bryozoan distribution (overview)
12.00 – 14.00	Practical session: methods of assessment bryozoan abundance
14.00 – 16.00	<i>Lunch</i>
16.00 – 18:00	Lecture: Ecology: competition in fouling communitites
18.00 – 20:00	Practical session: work with live material
20:00-21:00	<i>Dinner</i>

Day 13 – 29 August 2018	
Principles of colony organization	
09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Principles of colony organization
12.00 – 14.00	Practical session: polymorphism, part 2
14.00 – 16.00	<i>Lunch</i>
16.00 – 18:00	Lecture: Feeding structures and feeding behaviour
18.00 – 20:00	Practical session: work with live material
20:00-21:00	<i>Dinner</i>

Day 14 – 30 August 2018**Bryozoan evolution, taxonomy & phylogeny**

09.00 – 09.45	<i>Breakfast</i>
10.00 – 12:00	Lecture: Bryozoan evolution
12.00 – 14.00	Lecture: Bryozoan taxonomy and phylogeny
14.00 – 16.00	<i>Lunch</i>
16.00 – 20:00	Preparation for an assessment
20:00-21:00	<i>Dinner</i>

Day 15 – 30 August 2018**Exam & personal sampling, packing**

09.00 – 09.45	<i>Breakfast</i>
10.00 – 14:00	Exam
14.00 – 16.00	<i>Lunch</i>
16.00 – 18:00	Personal sampling, packing, lab cleaning
20:00	<i>Dinner and Farewell Party</i>

Day 16 – 31 August 2018**Departure**

09.00 – 09.45	<i>Breakfast</i>
11.00	Departure