

Brief CV

Natalia Nikolaevna Shunatova

Born 24 March 1975, Murmansk; citizen of Russia

Education:

PhD in Zoology, St.-Petersburg State University, 2002.

Postgraduate student, St.-Petersburg State University, 1999-2002.

Master of Science (Biology – Zoology), St. Petersburg State University, 1999.

Master student, St.-Petersburg State University, 1996-1999.

Bachelor of Science (Biology), St. Petersburg State University, 1996.

Undergraduate student, St.-Petersburg State University, 1992-1996.

Professional experience:

Associate Professor: Department of Invertebrate Zoology, St.-Petersburg State University, St.-Petersburg, Russia (2008 – present).

Senior Lecturer: Department of Invertebrate Zoology, St.-Petersburg State University, St.-Petersburg, Russia (2006 – 2008).

Lecturer: Department of Invertebrate Zoology: St.-Petersburg State University, St.-Petersburg, Russia (2000 – 2006).

Scientific interests:

- functional and evolutionary morphology, feeding strategies in marine Invertebrates;
- Bryozoa: taxonomy, anatomy, behaviour, polymorphism and features of colony organization;
- larval structure, settlement and metamorphosis of marine Invertebrates;
- marine fauna, structure and dynamics of benthic communities, biotic interactions.

Courses:

For undergraduate students:

- “Functional morphology and evolution of Invertebrates”;
- “Basic Zoology: Porifera, Placozoa, Cnidaria”;
- “Basic Zoology: Tentaculata”;
- “Basic Zoology: Pogonophora”;
- “Comparative anatomy of Invertebrates”;
- Summer field course “Invertebrate Zoology” (‘Gross Practicum in Invertebrate Zoology’ – 3rd year; White Sea Marine Biological Station);
- Summer field course “Zoology of Invertebrates” (1st year students; White Sea Marine Biological Station);
- Practical course “Zoology of Invertebrates” (1st year).

For master students:

- “General Zoology: Tentaculata”;
- “Special chapters of comparative anatomy”;
- “Evolutionary and functional morphology”;
- “Feeding strategies of hydrobionts” – section of the course “Trophology” (for Master students of Ichthyology and Hydrobiology Department).

Professional memberships and positions:

International Bryozoology Association

Publications:

(i) Papers in Refereed Journals

- Strelkov P., Shunatova N., Usov N., Fedyuk M., Malavenda S., Lubina O., Poloskin A., Korsun S. Marine Lake Mogilnoe (Kildin Island, Barents Sea): one hundred years of solitude // *Polar Biology*, 2014 (published on-line November, 2013, DOI 10.1007/s00300-013-1431-4).
- Tamberg Y., Shunatova N., Lezin P. 2014. Feeding behaviour of freshwater bryozoans *Cristatella mucedo* and *Plumatella fungosa* (Bryozoa, Phylactolaemata) // *Zoologicheskii zhurnal*. V. 93, № 3, p. 1-11 [in Russian, English summary].
- Tamberg Y., **Shunatova N.**, Yakovis E. 2013. Solitary entoprocts living on bryozoans – Commensals, mutualists or parasites? // *J. Exp. Mar. Biol. Ecol.* V. 440, № 1, p. 15-21.
- Yakovis E.L., Artemieva A.V., Fokin M.V., Varfolomeeva M.A., **Shunatova N.N.** 2013. Synchronous annual recruitment variation in barnacles and ascidians in the White Sea shallow subtidal 1999–2010 // *Hydrobiologia*, V. 706, p. 69–79.
- Varfolomeeva M.A., Artemieva A.V., **Shunatova N.N.**, Yakovis E.L. 2008. Growth and survival of barnacles in presence of co-dominating solitary ascidians: growth ring analysis // *J. Exp. Mar. Biol. Ecol.* V. 363, № 1, p. 42-47.
- Yakovis E.L., Artemieva A.V., **Shunatova N.N.**, Varfolomeeva M.A. 2008. Multiple foundation species shape benthic habitat islands // *Oecologia*. V. 155, № 4, p. 785-79.
- Yakovis E.L., Artemieva A.V., Fokin M.V., Varfolomeeva M.A., **Shunatova N.N.** 2007. Effect of habitat architecture on mobile benthic macrofauna associated with patches of barnacles and ascidians // *Mar. Ecol. Progr. Ser.* V. 348, p. 117-124.
- Yakovis E.L., Artemieva A.V., Fokin M.V., Grishankov A.V., **Shunatova N.N.** 2005. Patches of barnacles and ascidians in soft bottoms: associated motile fauna in relation to the surrounding assemblage // *J. Exp. Mar. Biol. Ecol.* V. 327, № 2, p. 210-224.
- Artemieva A.V., Grishankov A.V., Nikolaeva M.A., Fokin M.V., **Shunatova N.N.**, Yakovis E.L. 2004. The role of boring snails in benthic assemblage: drilled shells as information source // *Vestnik SpbGU. Ser. 3. Vyp. 4. PP. 5-9.* [in Russian, English summary].
- Shunatova N.N.**, Nielsen C. 2002. Putative sensory structures in marine bryozoans // *Invertebrate Biology*. 121 (3): 262 - 270.
- Shunatova N.N.**, Ostrovsky A.N. 2002. Group autozooidal behavior and chimneys in marine bryozoans // *Marine Biology*. 140: 503-518.
- Ostrovsky, A. N., **Shunatova, N. N.**, Antipenko I.I. 2002. Historical review on individual autozooidal behaviour and feeding mechanisms in Bryozoa // In Wyse Jackson, P.N. & Spencer Jones, M. (eds) *Annals of Bryozoology: aspects of the history of research on bryozoans*. International Bryozoology Association, Dublin. P. 201 – 228.
- Ostrovsky, A. N., **Shunatova N.N.** 2002. Colonial behaviour and group zooidal reactions in Bryozoa: history of the research // In Wyse Jackson, P.N. & Spencer Jones, M., (eds) *Annals of Bryozoology: aspects of the history of research on bryozoans*. International Bryozoology Association, Dublin. P. 185 – 200.
- Grishankov A.V., **Shunatova N.N.**, Yagunova E.B. 2002. Main features of epibiosis structures in the White and Barents Seas // *Vestnik SpbGU. Ser. 3. Vyp. 4 (№27). PP. 4-8.* [in Russian, English summary].
- Shunatova N.N.**, Ostrovsky A.N. 2001. Individual autozooidal behaviour and feeding in marine bryozoans // *Sarsia* 86:113-142.
- Grishankov A.V., **Shunatova N.N.** 2001. Fauna and structure of macrobiofouling communities on different species of intertidal kelp (Phaeophyta) from the White and Barents Seas // *Vestnik SpbGU. Ser. 3. Vyp. 4. PP. 24-28.* [in Russian, English summary].
- Shunatova N.N.** 1999. Some behaviour peculiarities and formation of directed water flow in pearlwort colonies (Bryozoa: Gymnolaemata) // *Journal of General Biology* 60 (2): 118 – 128 (In Russian, English Summary).

(ii) Book Chapters

- Shunatova N.N.** 2010. Phylum Bryozoa // in Tzetlin A.B., Zhadan A.E., Marfenin N.N. (eds.): *Flora and fauna of the White Sea*. KMK, Moscow. Pp. 209-222 [in Russian].
- Shunatova N.N.** 2006. Phylum Bryozoa // in Marfenin N.N. (ed.): *Atlas of marine Invertebrates of the White Sea*. KMK, Moscow. Pp. 262-280 [in Russian].

(iii) Abstracts and Proceeding

- Tamberg Y.Y., **Shunatova N.N.**, Lezin P.A. Individual behaviour in freshwater bryozoans *Cristatella mucedo*, *Plumatella fungosa* and *Fredericella sultana* // Proc. of XV conf. "Biology of inland waters", Borok, 2013, p. 371-375.
- Tamberg Y.Y., **Shunatova N.N.** Feeding behaviour and adaptations to absence of flow in freshwater bryozoan *Cristatella mucedo* // Proc. of conf. "Marine biology, geology, oceanology – interdisciplinary research at marine stations", Moscow, 2013, p. 293-298 [in Russian].
- Nikishina D.V., **Shunatova N.N.**, Ivanov M.V. 2013. Macrozoobenthos of *Laminaria saccharina* (*Saccharina latissima*) kelp forests: the influence of hydrodynamics // Proc. of conf. "Marine biology, geology, oceanology – interdisciplinary research at marine stations", Moscow, 2013, p. 216-220 [in Russian].
- Tamberg Y.Y., **Shunatova N.N.**, Yakovis E.L. Feeding interactions between kamptozoans *Loxosomella nordgaardi* and bryozoan *Tegella armifera* in situ and experimental study // Abstr. of 12th MBS SPbGU meeting, St.-Petersburg, 2011, pp. 57-59 [in Russian].
- Yakovis E.L., Artemieva A.V., Fokin M.V., Varfolomeeva M.A., **Shunatova N.N.** Long-term patch dynamics in the community shaped by bivalves, barnacles, ascidians and red algae: multiple foundation species in the White Sea shallow subtidal // 39th Benthic Ecology Meeting abstracts, Wilmington NC, 2010, p. 211-212.
- Yakovis E.L., Artemieva A.V., Varfolomeeva M.A., **Shunatova N.N.** Effect of hard structures on the surrounding benthic assemblage of the soft sediment // 39th Benthic Ecology Meeting abstracts, Wilmington NC, 2010, p. 5.
- Stogov I.A., Movchan E.A., **Shunatova N.N.**, Fokin M.V., Malavenda S.S., Lyubina O.S., Poloskin A.V., Strelkov P.P. Components of biotic balance in Mogilnoe Lake (Kildin Island, Barents Sea) // Abstr. of 4th International scientific conference to commemorate prof. Winberg "Modern problems of aquatic ecology". 2010, St.-Petersburg, p. 173.
- Tamberg Y.Y., **Shunatova N.N.**, Yakovis E.L. Size of consumed diatom algae indicates feeding segregation in symbiotic suspension-feeders: preliminary results. 42nd European Marine Biology Symposium abstracts, Kiel, 2007, p. 327.
- Varfolomeeva M.A., **Shunatova N.N.**, Khalaman V.V., Belyaeva D.V., Yakovis E.L. Choice of substrate by ascidian larvae does not explain the distribution of adults. 42nd European Marine Biology Symposium abstracts, Kiel, 2007, p. 199.
- Tamberg Y.Y., **Shunatova N.N.**, Yakovis E.L. Spatial distribution of solitary kamptozoans *Loxosomella nordgaardi* on the colony surface of two bryozoan species // Abstr. of 8th MBS SPbGU meeting, St.-Petersburg, 2007, pp. 71-72 [in Russian].
- Shunatova N.N.**, Lesin P.A. A mechanism of food particles transport in stenolaenate bryozoans (Bryozoa: Stenolaemata) // Abstr. of 8th MBS SPbGU meeting, St.-Petersburg, 2007, pp. 72-74 [in Russian].
- Lesin P.A., **Shunatova N.N.**, Khalaman V.V. A computer reconstruction method of feeding currents in filter-feeders // Abstr. of 8th MBS SPbGU meeting, St.-Petersburg, 2007, p. 59 [in Russian].
- Nikolaeva M.A., Yakovis A.S., **Shunatova N.N.**, Artemieva A.V., Yakovis E.L. Growth and survival of barnacles in the presence of ascidians as potential competitors: growth bands analysis. 35th Benthic Ecology Meeting abstracts, Quebec, 2006, p. 69.

- Artemieva A.V., Fokin M.V., Nikolaeva M.A., **Shunatova N.N.**, Yakovis E.L. Possible role of habitat complexity in structuring of motile benthic fauna by patches of barnacles and ascidians. 35th Benthic Ecology Meeting abstracts, Quebec, 2006, p. 47.
- Yakovis E.L., Artemieva A.V., Varfalomeeva M.A., **Shunatova N.N.** Ascidians against barnacles. A detective story with continuation // Proc. of 9th conf in memory of K.M. Derjugin, 2006, St.-Peterburg, pp. 27-34 [in Russian].
- Nikolaeva M.A., **Shunatova N.N.**, Khalaman V.V., Beliaeva D.V., Yakovis E.L. On substrate choosing by larvae of *Styela rustica* (L.) // Abstr. of 7th MBS SPbGU meeting, St.-Petersburg, 2006, pp. 68-69 [in Russian].
- Khalaman V.V., Beliaeva D.V., Nikolaeva M.A., **Shunatova N.N.**, Yakovis E.L. Substrate preferences of solitary ascidians *Styela rustica* (Linnaeus) // Abstr. of 7th MBS SPbGU meeting, St.-Petersburg, 2006, pp. 79-80 [in Russian].
- Strelkov P.P., Fokin M.V., **Shunatova N.N.**, Usov N.V., Fediuk M.L., Shoshina E.V., Malavenda S.S., Samys'ko Y.V., Red'kin D.V., Korsun S.A. Relict lake Mogil'noe (Kil'din island, the Barents sea): 80 years after Dejugin // Proc. of 8th conf. in memory of K.M. Derjugin, St.-Peterburg, 2005, pp. 44-59 [in Russian].
- Nikolaeva M.A., Yakovis E.L., Fokin M.V., **Shunatova N.N.**, Grishankov A.V. Growth dependence of *Balanus crenatus* Bruguiere on presence of epibenthic ascidians confirm the competition hypothesis // Abstr. of 6th MBS SPbGU meeting, St.-Petersburg, 2005, pp. 54-55 [in Russian].
- Kotenko O.N., **Shunatova N.N.**, Tsitrin E.B. Muscle system of three different morphotypes of marine bryozoan larvae: an immunocytochemical study // Abstr. of 6th MBS SPbGU meeting, St.-Petersburg, 2005, pp. 48-49 [in Russian].
- Artemieva A.V., Grishankov A.V., Nikolaeva M.A., Fokin M.V., **Shunatova N.N.**, Yakovis E.L. The role of predatory snails in the benthic community: perforated shells of victims as a source of information // Abstr. of 5th MBS SPbGU meeting, St.-Petersburg, 2004, pp. 37-38 [in Russian].
- Artemieva A.V., Grishankov A.V., Nikolaeva M.A., Fokin M.V., **Shunatova N.N.**, Yakovis E.L. Consortia concerned with empty shells of *Serripes groenlandicus* (Bivalvia) in the vicinity of Solovetskii Arhipelago (White sea): patterns of structure and dynamics // Abstr. of 5th MBS SPbGU meeting, St.-Petersburg, 2004, pp. 38-39 [in Russian].
- Fokin M.V., **Shunatova N.N.**, Usov N.V., Bufalova E.N., Malavenda S.S., Redkin D.V., Strelkov P.P., Shoshina E.V. Scientific report on expedition to Kil'din Island and Mogil'noe lake in august 2003 executed by SPbGU and MGTU // Abstr. of 5th MBS SPbGU meeting, St.-Petersburg, 2004, p. 51 [in Russian].
- Kotenko O.N., Tsitrin E.B., **Shunatova N.N.** Nervous and Muscular Systems of Coronate Larvae of *Callopora craticula* Alder, 1857 (Bryozoa: Gymnolaemata) // Abstracts of the 6th International Larval Biology Conference, Hong Kong. 2004. P. 112.
- Kotenko O.N., **Shunatova N.N.**, Yakovis E.L. Previous data on differentiated utilization of different substrate types by two bryozoan species in the White sea // Abstr. of conf. "Young biologists – for 300th city's anniversary", St.-Petersburg, 2003, pp. 13-14 [in Russian].
- Grishankov A.V., **Shunatova N.N.** Structure of sessile hydrobionts community associated with shells of *Chlamys islandicus* Mull. (Lamellibranchia) // Abstr. of 4th MBS SPbGU meeting, St.-Petersburg, 2003, p. 55 [in Russian].
- Grishankov A.V., **Shunatova N.N.**, Yagunova E.B. Some features of epifouling communities in the White and Barents Seas // Abstr. of 3rd MBS SPbGU meeting, St.-Petersburg, 2002, p. 53 [in Russian].
- Strelkov P.P., Grishankov A.V., Zubakha M.A., Barbina A.A., Basova L.A., Dobretsov S.V., Maltseva A.L., Puzanskii R.K., Tyntareva N.A., Filimonov N.Y., Fokin M.V., **Shunatova N.N.** Dynamics of intertidal macrozoobenthic community at Dalnyi Pliazh (East Murman)

// Proc. of conf. "Biological grounds of sustainable development of coastal ecosystems", Murmansk, 2001, p. 43-45.

Shunatova N.N. Formation and functioning of passive chimneys in *Schizomavella auriculata* var. *lineata* // Abstr. of intern. Conf. "Bryozoa of the World", St.-Petersburg, 1997, pp. 69-70.

Shunatova N.N. Observation on the behavior of some Bryozoan species from the White Sea // 31st EMBS Abstracts, St.-Petersburg, 1996, p. 74.

Projects

Project 12-04-01614-a, Russian Foundation of Basic Research (2012-2014), "Feeding structures in marine and freshwater bryozoans: morphology and function"

Project 12-04-10162-k, Russian Foundation of Basic Research (2012-2012), "Organization of expedition for collecting material to study morphology and function of feeding structures of marine and freshwater bryozoans"

Project 08-04-10129-k, Russian Foundation of Basic Research (2008-2008), "Organization and accomplishment of biological expedition for study of marine relict basins on Murman (the Barents Sea)"

Project 07-04-10086-k, Russian Foundation of Basic Research (2007-2007), "Organization of complex biological expedition for collecting material to study ecology, genetics and cellular biology of marine hydrobionts"

Project 07-04-01734-a, Russian Foundation of Basic Research (2007-2008), "Investigation of the influence of isolation on marine populations and communities on the example of the Relict Lake Mogil'noe (Island Kildin, Barents Sea)"

PhD project M02-2.6K-288 for young scientists, Committee of Science and High School in St.-Petersburg, Ministry of education of Russian Federation (2002-2002), "Comparative analysis of coelom structure in different groups of marine bryozoans (Bryozoa:Gymnolaemata)"

PhD project M00-2.6K-435 for young scientists, Committee of Science and High School in St.-Petersburg, Ministry of education of Russian Federation (2000-2000), "Comparative analysis of tentacle construction and sensory structures in different groups of marine bryozoans (Bryozoa:Gymnolaemata)"

Diploma project M98-2.6D-242 for young scientists, Committee of Science and High School in St.-Petersburg, Ministry of education of Russian Federation (1998-1998), "Peculiarities in the structure of feeding apparatus of sedentary organisms defined by their behavior – an example of marine bryozoans (Bryozoa:Gymnolaemata)"

Danish Government scholarship for foreign nationals (1998-1999)

Participating in:

Project 13-04-10178-k, Russian Foundation of Basic Research (2013-2013), "Conducting a scientific expedition to assess the effect of interactions between foundation species on structure and dynamics of marine benthic communities", PL Dr. E.Yakovis

Project № № 2.2.3.1/2456 RNP Development of the potential of the high school (2009-2010), "Development of complex educational materials on the basis of digital collection of the Zoological Museum of St-Petersburg State University", PL Prof. A.Granovitch

Project 08-04-01876-e_b, Russian Foundation of Basic Research (2008-2008), "Urgent repair of equipment required for studies in the field 04 at Faculty of Biology and Soil Sciences in St.Petersburg State University", PL Dr. A.Smirnov and Prof. L.Lutova

Project 07-04-05089-b, Russian Foundation of Basic Research (2007-2007), "Development of technical facilities for studies in field of knowledge 04 at the Faculty of Biology of St.Petersburg State University", PL Prof. Kanunnikov

- Project 2.2.3.1/4017 “Zoological Museum as a basis of the modernization of educational programs” Federal program “Development of the scientific potential of the High School (2006-2008)”, PL Prof. A. Granovitch
- Project 05-04-63003-k, Russian Foundation of Basic Research (2005-2005), “Organization of a complex expedition to study and collect protists and entoprocts in the White and Barents Seas”, PL Dr. A. Grishankov
- Project 04-04-48962-a, Russian Foundation of Basic Research (2004-2006), “Morphology and development of muscle and nervous systems in Entoprocta (=Kamptozoa)”, PL Prof. G. Slyusarev
- Project Э0195+Э0017/1048 of Federal Programm Integration of Science and Education (2002-2006), “Complex biological expedition 'Nord'”
- Project Э3251/1273 of Federal Programm Integration of Science and Education (2002-2006), “Zoological museum as important component of basic biological education and training of the zoologists”, PL Prof. A. Granovitch
- Project 02-04-50020-a, Russian Foundation of Basic Research (2002-2004), “Structure and dynamics patterns in marine benthic communities with edificator-species dominating: comparative analysis”, PL Dr. A. Grishankov
- Project 01-04-49788-a, Russian Foundation of Basic Research (2001-2003), “The nature of orthonectid plasmodium”, PL Prof. G. Slyusarev.
- Project 015.07.01.079, Universities of Russia (2000-2001), “Influence of key-stone species on structure and dynamics of benthic communities”, PL Dr. A. Grishankov
- Project 015.07.01.079 Universitites of Russia (2000-2001), “Main mechanisms of integration in macrozoobenthic communities of the White Sea shallow subtidal”, PL Dr. A. Grishankov