Studies in nearshore marine biodiversity and ecology in European Russia

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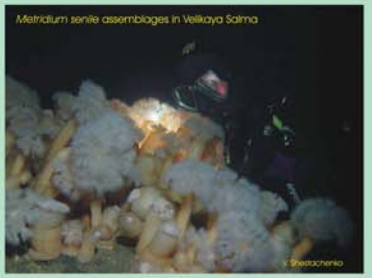
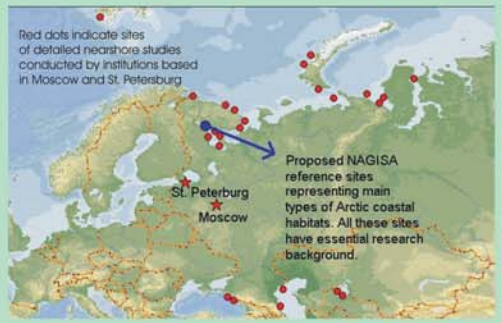




Three sites represent three types of the coastal zone:

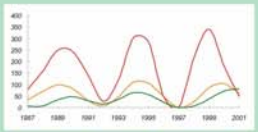
1. Semi-enclosed shore with active hydrodynamics in channels - N.A. Pertsov White Sea Biological Station of Moscow University - Velikaya Salma Strait

Regular observations on interstitial habitats, kelp (including detached kelp), hard bottom habitats

Formation of detached kelp in Velikaya Salma Strait (Tzetlin et al., 1996)

2. Enclosed shores with a large estuary, salt marshes and seagrass meadows - Chernaya River Base (Hydrobiology Department of Moscow University + IO RAS

Regular field observations since 1976 cover the entire ecosystem
Main research directions: 1).inventory of biodiversity;
2). Community ecology (trophic relations, migrations, multi-scale distribution

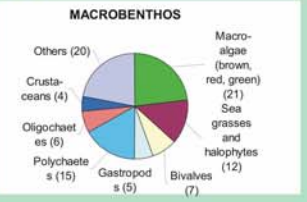


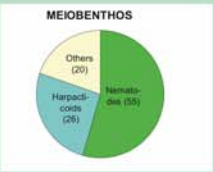
Red and green lines: eelgrass, *Zostera marina* yearly averaged biomass (g/m^2) in two small inlets near Cape Kartesh [eigenvector filtering (Colebrook, 1978) - 25% of total biomass.
Orange line: Arctic Oscillation Index (multiplied by 2; 56% of total index dispersion), shifted 3 years forwards.
Eelgrass biomass responds to this oscillation with a lag of 3 years.

3. Variously exposed shore - White Sea Biological Station of the Zoological Institute - Cape Kartesh

Long-term observations on muddy and sandy tidal flats since 1980s.

SPECIES DIVERSITY OF BLACK RIVER INTERTIDAL COMMUNITY





bstract

pean Russia regular studies on the ecology of nearshore areas are conducted in the Black and the White Seas. on-tidal Black Sea a full inventory of the rocky bench in endzhik Inlet (Caucasian Coast) was first conducted in late Recently this area became the focus of studies in the e and dynamics of algal vegetation by the Laboratory tal Ecosystems of the IO RAS.
hite Sea tidal and upper subtidal communities are of eristic boreal type but being strongly impacted by al sea ice. In the Kandalaksha Bay several long-term ns to study various aspects of the intertidal communities en launched in the last decades. In particular seagrass vs and the adjacent part of the tidal beds have been under the Cape Kartesh Biological Station of the Zoological RAS for nearly 25 years. Regular observations on nthic communities of tidal beds and macrobebthic nities of the fucoid belt in Chernaya River estuary and White Sea Biological Station of the Moscow University by ts of IO RAS and the Moscow University have similarly l ory. Recently monitoring studies have been launched also r subtidal communities on rocky bottom

mic expertise in the nearshore fauna maintained by work of specialists affiliated to several institutions of Moscow, rsburg, Petrozavodsk, Murmansk, Kaliningrad and Kazan' vely covers such groups as

hyta, da, eta, ocoida, da, da.

Rhodophyta, Hydrozoa, Olygochaeta, Mollusca, Amphipoda, Halacarina,

OUTREACH

The field work at sites mentioned above normally offer good possibilities for field practice of undergraduate and postgraduates students of several Russian universities and recently local school students from the coastal villages of the White Sea have been invited to take part in research activities.

These studies are well suited to be integrated with NAGISA programme but effort is needed to compare and standardize methods used.

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