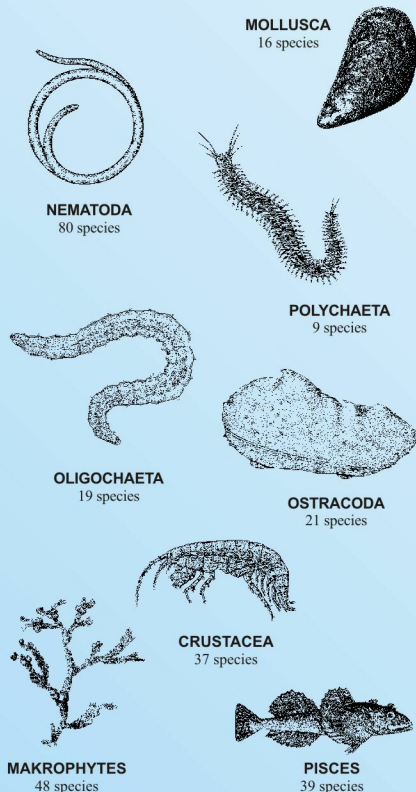


Relative to the poor Baltic conditions, the Bay of Puck is a species rich area: there were 48 macrophytes, 77 macrobenthos species 39 fish, 21 water and seabirds and three sea mammals noted in the Bay. Number of microorganisms is less known and surely exceeds some hundreds of species. Some specific numbers are presented below:



Other Baltic - North Sea region LTBR sites:

- Mecklenburg Bight, Germany - Inst. für Ostsee Forschung, Warnemünde, contact - dr Doris Schiedek, doris.schiedek@io-warnemuende.de
- Huso Biological Station, Tvärminne BS, Askö BS, Finland, contact - dr Eva Sandberg Kilpivi, eva.sandberg@helsinki.fi
- Sylt - Helgoland, Alfred Wegener Institut für Polar und Meeresforschung, Bremerhaven, contact - dr Fred Buchholz, fbuchholz@awi-bremerhaven.de

Web page links to selected research projects dealing with the Bay:

- MARBEF, <http://www.marbef.org/>
 MARBENA, <http://www.vliz.be/marbena/>
 COSA, <http://www.eu-cosa.net/>
 BIOCOMBE, <http://www.biocombe.org/>
 BIOSPHERE, <http://www.iopan.gda.pl/projects/biosphere>

Selected references:

Korzeniewski J., (ed), 1990, Zatoka Pucka. University of Gdańsk 532 pp.

Kruk - Dowgiało L., (ed), 2000, Przyrodnicza waloryzacja morskich części obszarów chronionych HELCOM BSPA województwa pomorskiego, 3. Nadmorski Park Krajobrazowy, Crangon 7, 1-186.

Majewski K., (ed), 1985, Zatoka Gdanska. IMGW Gdynia, - 501 pp.
 Jazdzewski K., (1970,) Biology of Crustacea Malacostraca in the Bay of Puck, Zoologia Poloniae, 20, 423- 48.0.

Ossowiecki A., (2000), Kierunki wieloletnich zmian w strukturze makrozoobentosu Zatoki Puckiej. Crangon 3, 1-134.

Witek Z., (1995), Produkcja biologiczna I jej wykorzystanie w ekosystemie morskim w zachodniej części Basenu Gdańskiego. Morski Inst. Rybacki, Gdynia, 1-145.

Zmudzński L., (1990), Świat zwierzęcy Bałtyku. Wydawnictwa Szkolne i Pedagogiczne. Warszawa, 196 pp.

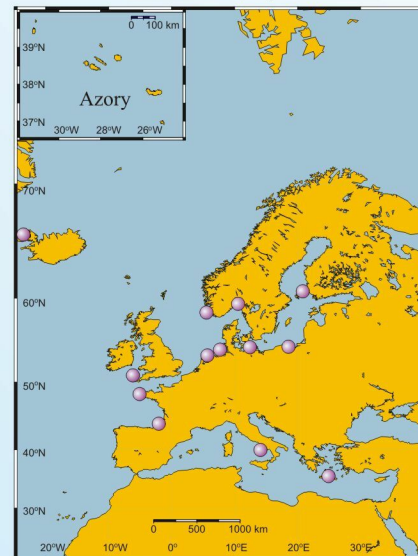


contact: Jan Marcin Weśławski, weslaw@iopan.gda.pl
<http://www.iopan.gda.pl/projects/biodaff/>

EUROPEAN LONG TERM BIODIVERSITY RESEARCH SITE (LTBR)

BAY OF PUCK

Under the auspices of the EU MARBENA and MARBEF programs



● Long-term Biodiversity Research Sites

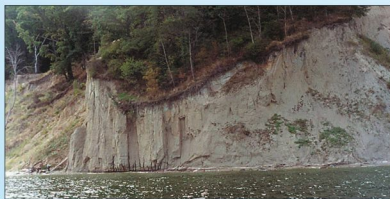
NETWORK OF EXCELLENCE IN EUROPEAN MARINE BIODIVERSITY RESEARCH

MarBEF

Coordinator Prof. Carlo H.R. Heip and Prof. Herman Hummel,
 Netherlands Institute of Ecology, Center for Estuarine and Coastal Ecology, 4401 NT Yerseke, The Netherlands
 heip@cemo.nioo.knaw.nl
 www.marbef.org

Bay of Puck, southern Baltic (54°45'N, 18°30'E)

Selected for its importance to regional fauna as a genetic pool and a source of species, the site is also a significant international training and research area in marine biodiversity. With the first studies of this basin dating to the 1920s, the bay serves as a monitoring and reference area which can give clear early warning signals if environmental conditions worsen.



MORAINE CLIFFS AT OSŁONINO

The institutes involved in local biodiversity research are the Institute of Oceanography, University of Gdańsk; the Sea Fisheries Institute; the Institute of Oceanology, Polish Academy of Sciences; the Institute of Hydrobiology, University of Łódź. The local coordinator of the MARBENA/MARBEF program is Jan Marcin Węślawski.



HEL MARINE STATION

The main field research facility is the Hel Marine Station of the Institute of Oceanography, University of Gdańsk. The contact person is Dr. Krzysztof Skóra. e-mail: oecks@univ.gda.pl

The Bay of Puck has an area of approximately 40,000 ha and forms the innermost part of the Bay of Gdańsk. Its shores are mainly beaches of fine-grained quartz sand with small patches of stones and boulders. There are three small rivers entering the bay with an annual discharge of 0.1 km³. The area has been under protection as a Seaward Landscape Park since 1990. This region is also the site of an important breeding ground for a number of bird species (Bird Sanctuary at the Reda River mouth).



BOAT FISHERMEN

There are eight different benthic marine habitats in the Bay of Puck. A habitat is a distinct complex of physical features of ground and water that form an easily distinguished entity. Usually, each habitat is used by different species that are adapted to live within it.



STONY OUTCROPS ON THE SANDY BOTTOM

In nature, some species are more important than others. When they form the living space or habitat for other species, they are referred to as "keystone" or key species. In the Bay of Puck, the key species are sea grass, *Zostera marina*, and shoal-forming bivalves, *Mytilus edulis trossulus*. The community, or assemblage, is the group of many species that occur together in a similar habitat. The main community in the Bay of Puck is a cluster of species associated with large algae and sea grass.



SEAGRASS BEDS

A bioindicator is a species that, through its occurrence, provides complex and integrated information regarding the local environment. The domination of Chironomidae larvae, Oligochaeta and the polychaete *Hediste diversicolor* in the Bay of Puck benthos indicates that oxygen conditions are poor. The occurrence of large crustaceans like the shrimp species *Palaemon adspersus* and *Crangon crangon*, on the contrary, indicates that the benthic environment is well aerated and healthy. A local carnivorous fish, *Zoarces viviparus*, accumulates heavy metals and can serve as a bioindicator of contamination with these substances, which can be monitored easily.



SANDHOPPER - A KEY SPECIES ON SANDY BEACHES