

3<sup>rd</sup> International Conference on

# Oceanography

June 22-24, 2015 Philadelphia, USA

## Reconstruction of palaeoenvironment and Baltic Sea level changes during Holocene by the records of archaeological and geological evidences on Stone Age sites

**Marianna Kulkova**

Herzen State University, Russia

The region of north-western Russia connecting with Baltic Sea presents a dynamic ecological system that was sensitive to environmental changes at the end of the Last Glacial Period and during the Holocene. Contextual remains of ancient human occupation sites can be the only evidence of surface stabilization in monotonous sediments, such as aquatic and subaquatic deposits. Prehistoric settlements also mark ancient shorelines. The last is of great importance for studying the history of water oscillations and costal lines displacement on territory of North-Western Russia. The difference in the modern elevation levels of synchronous costal archaeological sites at large water bodies, such as the Baltic Sea, allows considering the tectonic movements in the referenced time scale during Holocene. The transgressive-regressive stages of Baltic Sea (at 10150 cal BP — Ancilus transgression; at 9400-8700 cal BP Littorina transgression; at 7000 cal BP transgression) have an impact on the positions of prehistorical sites. The complex investigations (lithology, geochemistry, pollen analysis, diatom analysis, radiocarbon dating) of the Stone Age archaeological settlements on Karelian Isthmus and at Dvina-Lovat' basin allow us to reconstruct the paleoenvironmental changes during Holocene and chronology of cultural-historical processes.

### Biography

Marianna Kulkova graduated from St. Petersburg University, Department of Geology, Degree Awarded in Mineralogy, Petrology and Geochemistry in 1994. She was awarded a degree in Doctor of Philosophy in 2005 at St. Petersburg University, and was a Doctoral Candidate in Mineralogy and Geochemistry. In 2008 she took the post of Associated Professor in Herzen State University (St. Petersburg, Russia) where she applied methods of geochemistry and radiocarbon dating in archaeology and environment. She has published more than 50 papers in reputed journals.

[kulkova@mail.ru](mailto:kulkova@mail.ru)

Notes: