

# **CALCULATION OF MEAN SR ISOTOPE RATIO FOR THE MODERN CASPIAN AND AZOV SEAS BASED ON THEIR CATCHMENT BASINS**

Anastasia Gavrilova

Master Program Polar and Marine Sciences POMOR / 050406 Ecology and environmental management

Supervisors:

Prof. Dr. Eva-Maria Pfeiffer, Hamburg University

Prof. Dr. Anton Kuznetsov, Saint Petersburg State University, Russian Academy of Sciences Institute of Precambrian geology and geochronology

Values of strontium isotope ratio variations in different natural objects provide new data, which is important in paleogeographic reconstructions, and in determining the birthplace of ancient humans.

This thesis presents a map of the structural-formational complexes of the Caspian and Azov catchment basins. Based on this data, calculations showing the values of strontium isotopic composition  $^{87}\text{Sr}/^{86}\text{Sr}$  for different types of rocks were carried out.

Data was also obtained from samples of modern freshwater mollusks. They inhabit watersheds which are characterized by different bedrock types. Samples from landscapes characterized by the same type of sediments were found to have a close  $^{87}\text{Sr}/^{86}\text{Sr}$  strontium isotopic composition. Significant variations are observed in samples taken in landscapes which differ in the underlying rocks.