



The Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research (AWI) is a member of the Helmholtz Association (HGF) and funded by federal and state government. AWI focuses on polar and marine research in a variety of disciplines such as biology, oceanography, geology and geophysics thus allowing multidisciplinary approaches to scientific goals.

Our project “Dynamics of thermal tolerance limits in marine bivalves: temperature related stressors in extant fauna and palaeo-analogues (Biv-TRS)” invites applications for 2 positions as

## PhD student

### (1. Focus on scallops, 2. Focus on oysters)

#### Background:

Embedded in the DFG Research Unit “Temperature-related stresses as a unifying principle in ancient extinctions” (TERSANE), this project is proposed to assess the physiological constraints imposed by so-called temperature-related stresses (TRS: warming, ocean acidification, and hypoxia) on two taxa of marine bivalves. Biv-TRS follows the hypothesis that common physiological principles underpin palaeo- and current observations of climate effects on marine organisms. Therefore, Biv-TRS will (1) investigate the physiological effects of changing temperature alone and of temperature together with the other climate change drivers in extant pectinoids and ostreoids from European seas. These two groups have a rich fossil record and experienced several extinction episodes. Among pectinoids, pectinids (scallops) are characterized by their unique capacity to swim while many sessile ostreoids (oysters) are cemented to the bottom, form dense beds and act as habitat engineers. In contrast to scallops, oysters are also found in the intertidal zone and more tolerant to variable environmental conditions. Biv-TRS will also (2) examine how and to what extent shifts in the first (sublethal) lines of thermal limitation are caused by ocean acidification, hypoxia, and the combined action of TRS. Further efforts will address the mechanisms involved in setting and shifting sublethal thermal limits, at whole organism, tissue and cellular levels. Focusing on two ecologically distinct taxa of marine bivalves with a rich fossil record will facilitate (3) the comparison with palaeo-biological results.

#### Requirements:

##### Preconditions

- Master or diploma in a relevant area of biology
- Interest in evolutionary and ecophysiological questions
- Training in physiological investigations in animals

##### Desirable skills and experience in

- the long term maintenance and incubation of aquatic animals
- biochemical and analytical techniques (e.g. chromatography, spectroscopy)
- organismal physiology (e.g. respiration, cardiocirculation)

For more information or questions regarding the project, please contact Prof. Dr. Hans-Otto Pörtner (Hans.Poertner@awi.de), Dr. Christian Bock (Christian.Bock@awi.de) or Dr. Gisela Lannig (Gisela.Lannig@awi.de).

The position is limited to 3 years. The salary will be paid in accordance with the German Tarifvertrag des öffentlichen Dienstes (TVöD Bund), salary level 13 (66%). The place of employment will be **Bremerhaven**. Successful candidates should be able to take part in a two week summer school in Erlangen beginning July 25, 2016.

We offer you a multi-disciplinary, international, and fascinating professional environment with flexible working hours, state-of-the-art research equipment, and a first-rate infrastructure. Disabled applicants will be given preference when equal qualifications are present. The AWI fosters the compatibility of work and family through various means. Because of our engagement in the area of work-life compatibility we have been awarded the certificate "Career and Family".

As Ph.D. student at AWI you will be member of the Helmholtz Graduate School for Polar and Marine Research 'POLMAR' (<http://polmar.awi.de>) or another graduate school.

Please forward your applications with the standard documentation (cover letter with motivation, CV and two references / letters of recommendation) by **June 19<sup>th</sup>, 2016** referencing code **82/D/Bio** to: Alfred-Wegener-Institut für Polar- und Meeresforschung, Personalabteilung (human resources), Postfach 12 01 61, 27515 Bremerhaven/Germany (or by e-mail (all documents merged into one PDF file) to: [personal@awi.de](mailto:personal@awi.de)).