

Newsletter



July-August-September-October 2015

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1. MARS Travel Awards 2016

We are proud to announce the MARS travel awards for young scientists. For 2016 two awards of maximum 750 € will be granted to promising young scientists or students at MARS member institutions to study a research topic at another MARS member institute. Both institutes must be full members who have paid their membership fee for 2015, or have announced their intention to become a member in 2016.



The research topic should fall into one of the following themes:

- Marine biodiversity, including taxonomy, ecosystem functioning, observatories, indicators
- Marine genomics and molecular biology
- Marine model organisms and natural products
- Climate change problems
- Sustainable ecosystems and human factors
- Preservation and sustainable exploitation of marine ecosystems

After completion of the project an abstract of the results has to be published in the MARS Newsletter.

Proposals should include a maximum 2 page outline of the intended research, the addresses of the sending and receiving MARS member institutes, a letter of support from the sending and the host institute, and a CV of the applicant (who may not be older than 35 years).

Proposals can be sent to the MARS Secretariat, at marinestations@gmail.com.

The deadline for sending proposals is 31 December 2015.

2. MARS Poster Prizes at the Aquatic Biodiversity and Ecosystems Conference

At this year's "Aquatic Biodiversity and Ecosystems Conference", jointly hosted by the University of Southampton and Plymouth University between August 30th and September 4th 2015, two MARS poster prizes were awarded:



The first prize went to Elizabeth Elliot (School of Geography, Earth and Environmental Sciences, Plymouth University, Plymouth, UK). Title: Ubiquitous engineers, unique habitats: the importance of everyday ecosystem engineers on the species richness of UK rocky shores.

The second prize went to Zahra Alsaffar (Red Sea Research Center, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia). Title: Seasonality does not affect the signature of macrobenthic assemblages associated with seagrass meadows in a hypersaline sub-tropical coastal lagoon.

3. MARS Poster Prizes at the 50th European Marine Biology Symposium (EMBS)

This year at the 50th European Marine Biology Symposium, organised at Helgoland, Germany, three poster prizes were jointly awarded by MARS and the Marine Biological Association of the UK (MBA).

The first prize went to Ann Evankow (University of Oslo, Norway). Title: Genetic tools reveal diversity and structure of kelp forests in Norway.

The second prize went to Christopher Gross (Alfred Wegener Institute, Helgoland, Germany). Title: The influence of submerged tetrapods on Helgoland's subtidal mobile benthic community.

The third prize went to Merle Bollen (University of Bremen, Germany). Title: Artificial substrates in marine habitats: effects on community composition and seaweed recruitment.



4. Your entry in the "World Atlas of Marine Stations"

Some weeks ago a survey has been launched to collect the data for the World Atlas of Marine Stations, in which all marine stations around the globe will be entered. Also, a website will be build, on which it will be possible to easily search for marine stations with certain characteristics.

Until now, we have received 30 reactions. If you have not filled in the survey yet, you can still do so till July 2016 at <https://www.surveymonkey.com/r/WWVRNN8>.

If you want to distribute this link to as many heads of stations as possible, please feel free to do so.

5. Report of MARS travel award 2015 winner Nadezhda Rimskaya-Korsakova

Nadezhda N. Rimskaya-Korsakova, from the Department of Invertebrate Zoology, Lomonosov Moscow State University, Russia, was involved in the project “Neural reconstruction of bone-eating *Osedax* spp. and evolution of Siboglinidae nervous system” under supervision of Katrine Worsaae at the laboratory in the Marine Biology Section, University of Copenhagen, Denmark.



During Nadezhda’s stay in Copenhagen it was possible to write a new project focusing on the architecture of the siboglinid brain. They hope to gain new fascinating results and pictures, that may be a beneficial contribution to “siboglinodology”.

A short abstract of the results can be found below. Results of the project were submitted to a peer-reviewed journal.

Siboglinidae is a group of annelids including vestimentiferans, frenulates and Sclerolinum that can be found at deep-sea reduced environments such as hydrothermal vents and cold-water sulfide/hydrocarbon seeps, whereas *Osedax* tubeworms inhabit decaying vertebrate bones (Goffredi et al., 2004, 2007; Rouse et al., 2004). All siboglinids lack a mouth and digestive tract as adults and are dependent on a bacterial endosymbiont. The slender long body of frenulates is less than one mm wide but more than 50 cm long and species such as the giant tubeworm, *Riftia* (Vestimentifera), can reach a length of one and a half meter, whereas the *Osedax* females normally are a few centimeters long and their dwarf males less than one mm. Different molecular methods are struggling to resolve the phylogenetic position of the enigmatic *Osedax* and siboglinid relationships within the group (Rouse et al., 2004, 2015; Echinger et al., 2013; Glover et al., 2013; Li et al., 2015). The nervous system is known as a very useful morphological tool to show the homologies inside the animal groups and provide data for evolutionary conclusions. The Siboglinid nervous system is not described enough to provide comparative analysis among representatives of the group. The only thing that we know is that aberrant nervous system and the ventral brain of Siboglinidae developed from a ladder-like nervous system with a dorsal brain, as seen in other annelids. Idea of the project was to focus on the nervous system of adult bone-eating females *Osedax* and male *Osedax priapus* by means of immunocytochemistry and transmission electron microscopy. The nervous system of bone-eating *Osedax* forms are described for the first time. The intraepidermal, fence-like nervous system of *Osedax* comprises a ventral brain with two commissures, two widely separated ventral nerve cords with few commissures, and double palp nerves, that can all be traced to represent ancestral states of Siboglinidae (often plesiomorphic); sometimes diverging or only being present in larval stages of other siboglinids. Moreover, a broader comparison of the nervous system and body regions across *Osedax* and Siboglinidae diversity led to new suggested homologies of the hardly discernable segments in *Osedax* males and females.

