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Nocturnal artificial light in the focus of global research

Completion of this year's GAME project at GEOMAR

08 January 2024 /Kiel. Does artificial light at night change the composition of marine communities in shallow coastal waters and does it make a difference whether it is yellow or white light? The 19 international students involved in this year's GAME project investigated these questions in ten different locations around the world. At the end of the programme, they presented their findings at various universities in northern Germany. The unique international research and education programme for marine science students has been offered at the GEOMAR Helmholtz Centre for Ocean Research Kiel for 21 years. Applications for 2024 are open until 31 January.

19 students, ten countries and one common research question: that was the GAME 2023 project. "GAME" stands for "Global Approach by Modular Experiment" and is a unique international research and education programme for students of marine sciences, which has been offered at the GEOMAR Helmholtz Centre for Ocean Research Kiel since 2002. German and international students work together in teams of two. One team member always comes from a German university, the other from one of the GAME partner institutes. Unfortunately, in 2023 one student had to work alone at the site in Malaysia due to a last-minute cancellation.

As usual, the 21st GAME year started in March in Kiel. All 19 participating students met here for a four-week course to work on the experimental setup for this year's common research question. In

“We observed very strong growth under the influence of white light,” says Amelie Muntschick, who carried out the research with her tandem partner Isia Sousa from Mindelo on the Cape Verdean island of São Vicente. “Species diversity declined sharply after the initial colonisation, so that only a few species were able to establish themselves, but they produced a lot of biomass”. This could be an interesting result for boat owners struggling with fouling.

The Kiel student is grateful for the experience of setting up her own research project from the very beginning without having to work alone: “We did all the work steps as a team. There are so many challenges along the way,” she says, looking at her team partner. Isia Sousa nods: “It really is always surprising. Something would come up every day and then the solutions were the highlights.” The young Cape Verdean is still studying for her bachelor's degree, while most of the others will be writing their master's theses as part of GAME.

But for now, they are touring the university campuses of northern Germany to present their research and promote GAME - preparations for the 22nd GAME are already underway. This year's project will focus on how artificial light at night affects the growth, photosynthetic performance and defence capabilities of macroalgae. Applications are open until 31 January.

Links:

<https://www.geomar.de/en/research/fb3/fb3-eoe-b/game/game-about-game> About GAME

<https://www.oceanblogs.org/game/> GAME-Blog

<https://www.geomar.de/en/research/fb3/fb3-eoe-b/game/game-information-for-students> Information for students

Images:

Images are available for download at <http://www.geomar.de/n9255-e>

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