



Press release

15.04.2015

Marine Research in the Museum

Funding: 420,000 euros for a cooperative project on the health of porpoises, grey seals and harbor seals.

Harbor porpoises (*Phocoena phocoena*), harbor seals (*Phoca vitulina*) and grey seals (*Halichoerus grypus*) are native to the North Sea and in smaller numbers also in the Baltic Sea. All three species are increasingly at risk. Although they are a top predator in the marine ecosystem - i.e. at the top of the food pyramid and with no natural enemies in their habitat - various factors such as pollution, fishing of the seas, global warming and increasing use of the ecosystem by humans, through shipping or offshore wind turbines, for example, can affect these species. These factors can have serious consequences for the health of these mammals.

The Volkswagen Foundation is now providing 420,000 euros to support a cooperative project to examine changes in the health of marine mammals that have taken place over the past decades. Scientists Dr. Ursula Siebert and Dr. Kristina Lehnert from the Institute for Terrestrial and Aquatic Wildlife Research (Büsum site) of the University of Veterinary Medicine Hannover (TiHo) are collaborating with researchers from universities and museums in Denmark, Sweden and Germany. The TiHo researchers are leading the project together with scientists from the University of Hildesheim and the Zoological Museum in Hamburg.

The head of the institute, Ursula Siebert, says: Germany's museums and universities and the

cooperating museums in Sweden and Denmark have unique collections. This includes skeletons as well as materials and parasite samples of the marine mammalian species from North and Baltic Sea that have been frozen or preserved in formalin. The material has been collected over the decades and now will allow the scientists to examine various parameters in order to record whether the health or populations of these species have changed in different areas and over long time periods. Dr. Kristina Lehnert explains: The project combines new analysis methods and the respective expertise of the partners involved to examine harbor porpoises, harbor seals and grey seals. They hope to determine how health status, diet and pollution levels differ among the three species in the North and Baltic Seas. The results will be presented in a travelling exhibition in the different museums involved, as well as through other means.

Specifically, the scientists will compare bone density and bone structure in preparations spanning several decades and examine bones and fur for trace elements and heavy metals such as mercury, lead and selenium. In addition, they will analyze changes in the food spectrum and search for stress markers to see whether environmental conditions have changed over time. Project partners will also check the specimens for pathogens. They will try to detect viruses and categorize the parasites of the three mammalian species. Ursula Siebert summarizes: At the end of the project, hopefully we will have worked out parameters suitable for describing the health of our marine mammals over a long time period.

The project partners complement each other. In addition to the specimens from the collections, we need expertise and state-of-the-art techniques for the analyses. Everybody will contribute a unique skill set, says Kristina Lehnert. These skills include experience with molecular biological and morphological methods to analyze pathogens and knowledge of the significance of chemical pollutants for the health of marine mammals. Also included are experts able to draw conclusions about environmental influences and food supply on the basis of bone and teeth material and to analyze morphological stress markers in tooth enamel. Moreover, knowledge is required to detect viruses in the samples and to evaluate the effects of pollutants on marine mammals.

In addition to TiHo, the Zoological Institute and the Zoological Museum of Hamburg University, the German Marine Museum in Stralsund, the Zoological Institute and Museum at the University of Kiel, Hildesheim University and the National History Museum in Denmark and the Swedish Museum of Natural History are involved in the project.

Contact

Dr. Kristina Lehnert
University of Veterinary Medicine Hannover
Institute for Terrestrial and Aquatic Wildlife Research
Tel.: +49 511 953-8171

[Send e-mail](#)

Files:

[PM150415_Meeresforschung_im_Museum1_02.JPG](#) 1.5 MB
[PM150415_Meeresforschung_im_Museum2_02.JPG](#) 1.2 MB

[back to list](#)

You are here: [News & Press](#) > [Press Releases](#) > [Press Releases 2015](#)

Dieses PDF-Dokument wurde dynamisch auf www.tiho-hannover.de erstellt.

Letzte Aktualisierung dieses Dokumentes: 11. February 2016

© Stiftung Tierärztliche Hochschule Hannover, Bünteweg 2, 30559 Hannover, Phone: +49 511 / 953 - 60