AARHUS UNIVERSITY

EXTERNAL SEMINAR

DEPARTMENT OF ENVIRONMENTAL SCIENCE

Frederiksborgvej 399, 4000 Roskilde

6 June 2019, 11:00 – 12:00

Venue: the Pavilion, at Risø Campus in Roskilde, AU

Title: Taking advantage of the 'omics' revolution for monitoring and conservation of wildlife populations.

Speaker: Shaili Johri, San Diego State University, California, USA. Shaili is a geneticist with a research focus in conservation genomics of wildlife populations. She completed her B.S. and M.S. in India and moved to the United States for her Ph.D in Genetics. She did her post-doctorate at the Center for Conservation Biology, University of Washington, Seattle and is currently a research faculty at San Diego State University in association with Dr. Elizabeth Dinsdale's laboratory. Shaili works at the intersection of conservation policy and interdisciplinary research. Her research career spans projects relating to conservation of tigers in western India, wolves in northwest USA, killer whales in the Pacific Northwest and now sharks and rays in the southwest US and India. Shaili's role as a project lead involves developing genomic and metagenomic tools to assist with biodiversity assessments and population health monitoring of marine megafauna such as sharks and killer whales. In parallel to her research, Shaili works in close collaboration with fishing communities to develop science based conservation policies through cross-sector collaborations, outreach and education. In addition to her research, Shaili engages in capacity building for genomic methods among wildlife research communities in the US and abroad.

Abstract: With increasing occurrence of anthropogenic and natural disturbances in the environment, monitoring of wildlife populations with respect to disruptions is integral to conservation and management of species. Apex predators are vital to top-down regulation of ecosystems and are often the most impacted by disturbances. The recent explosion in next-generation sequencing technologies has allowed unprecedented access to 'omic' data among non-model species and these technologies can be harnessed for comprehensive health profiling and ecological assessment of wildlife which is difficult to access using traditional methods.

I will present research on apex predator populations (wolves, sharks and killer whales) with respect to their genomic, transcriptomic and microbiome profiling. I will also discuss the use of these measures in understanding population size/structure, distribution, health, species interactions and the effect of pollution on wildlife. Last, implications of these data in conservation, and management will be discussed.

Host: Anne Winding, Senior Scientist, Environmental Microbiology & Biotechnology, Department of Environmental Science, Aarhus University

External Guests interested in attending the presentation should e-mail Department Secretary Christel Ege-Johansen, cej@envs.au.dk