

UConn

UNIVERSITY OF CONNECTICUT

Department of Marine Sciences
Presents a Seminar By

Nils Volkenborn
Stony Brook University

Explorations beneath the surface: How burrowing organisms affect the function of the seafloor

Published in 1881 “The Formation of Vegetable Mould through the Action of Worms, with Observations on their Habits” was Charles Darwin’s last scientific book in which he elaborated on the significance of earthworms in the history of the Earth through their impact on soil formation. Very similarly, the world’s largest ecosystem in areal coverage - the seafloor - is inhabited by diverse burrowing organisms which continuously rework and irrigate the sediment - a process referred to as bioturbation. The use of novel sensors allows us to peek into the seafloor and to link the activities of burrowing organisms to their biogeochemical impact with unprecedented spatial-temporal resolution. 2-D imaging of oxygen uncover the extremely dynamic and spatially heterogeneous redox conditions in the presence of bioturbating organisms. Porewater pressure measurements reveal the spatial extent of biologically driven porewater flow. Redox oscillations on time scales of minutes and bioadvective transport of porewater over tens of centimeters challenges the view of sediments as being diffusion dominated steady state systems. In this seminar I want to give a sense of this dynamism and complexity and discuss some of the implications for the function of benthic systems.

Host: Zosia Baumann

Time & Date: 11:00 am, Friday, November 6, 2015

Place: Marine Sciences Building, Seminar Room 103

Please see this [page](#) for cancelations and additional seminar information, email marinesciences@uconn.edu, or call 860-405-9152 or 860-405-9151