SUSAN SCHNUR

Oregon State University, College of Earth, Ocean, and Atmospheric Sciences

Degrees:
M.Sc. in Geography with specialization in GIS, University of Zürich
B.A. in Geology, Carleton College

Scholar Award Donors:
Elisabeth and Peter Lyon

About the Scholar:
Susan studies submarine volcanism and the origin and evolution of volcanic chains on the seafloor. Her current research focuses on the formation of the Walvis Ridge in the South Atlantic. Although it is one of the longest and most distinct volcanic trails in the Atlantic it has remained mostly unexplored. Using argon geochronology, Susan is determining the ages of rocks dredged from seamounts in this region. The ages will allow us to piece together how the Walvis Ridge formed over time and how the spatial and temporal distribution of volcanism relates to the motion of the African plate over the Tristan hotspot.

Benefits to Society:
Earth scientists do basic research to understand the forces that have created and modified earth's landscapes. Marine geologists focus specifically on the formation of the seafloor and ocean islands. Although the Hawaiian Islands have been studied in great detail, there are many other volcanic chains that we know almost nothing about. Seamounts are important in geology research because they are an expression of the deep earth processes that generate magma far from tectonic plate boundaries. Volcanic edifices are also important as fish habitats in the open ocean and may host significant mineral resources. Although deep sea research does not carry the same allure as space exploration, there is still much to be learned about this important part of our planet.

Awards and Honors:
Schlanger Ocean Drilling Fellowship, Consortium for Ocean Leadership
Provost's Distinguished Graduate Fellowship, Oregon State University
Association of Women Geoscientists, Brunton Award

Publications and Posters:

Schnur, S. and Soule, S.A. (2013). The Challenges of Measuring Geyser Deformation with LiDAR. LiDAR News eMagazine, 3(3).

Schnur, S. and Gilbert L.A. (2012). Detailed volcanostratigraphy of an accreted seamount: Implications for intra-plate seamount formation. Geochem., Geophys., Geosys., 13, Q0AM05, doi:10.1029/2012GC004301.

Schnur, S. and Koppers, A.A.P. (2012). High-Resolution Geomorphometry of Seamounts of the Young Walvis Ridge Guyot Province. Abstract OS51D-1894, 2012 Fall Meeting, AGU, San Francisco, CA, 3-7 Dec. (poster presentation)

Schnur, S., Escartin, J., Purves, R.S., Früh-Green G. and Soule, S.A. (2011). Automatic Fault Extraction at Mid-Ocean Ridges: Effects of Bathymetry Resolution and Extraction Method. Abstract OS24A-08, 2011 Fall Meeting, AGU, San Francisco, CA, 4-10 Dec. (oral presentation)

Schnur, S., Bektas, K., Salahi M. and Çöltekin, A. (2010). A Comparison of Measured and Perceived Visual Complexity for Dynamic Web Maps. Proceedings of GIScience 2010, Zürich, Switzerland. (refereed extended abstract)

Schnur, S.R. and Gilbert, L.A. (2009). A model for seamount formation based on observations of a California ophiolite. Abstract V51D-1746, 2009 Fall Meeting, AGU, San Francisco, CA, 14-18 Dec. (poster presentation)