

POS 522 Weekly Science Report (23/04/18 to 29/04/18)

Armin Freundt and POS 522 Scientific Party

This week had another 1.5 work days, Monday and Tuesday morning, which we used for three dredge pulls at the No-Name seamounts west of Stromboli in order to test for the continental or volcanic origin of these hills. Two dredges were entirely filled by mud, showing that these structures are thickly covered by sediment. One dredge, however, also contained a large number of rock fragments from lapilli to 20-cm block size as well as hard grounds in the sediment covered and cemented by Manganese precipitates. The rocks are all of volcanic origin, comprising black cpx-pl phyric pillow lava fragments with vesicular interior and dense, smooth rims, am-pl phyric moderately vesicular gray rounded lapilli, one fragment with a 3-cm amphibole megacryst, chips of fluidally shaped black glass, and blocks of “sandy” tuff lacking fine ash and probably derived from underwater eruption. All rocks looked fresh rather than altered as initially expected from the thick sediment cover at the other dredge sites. These findings strongly support a volcanic origin of the No-Name seamounts. Tuesday night the crew organized a “Bavarian Party” on deck where we all celebrated the good and successful collaboration of the past two weeks. Wednesday saw us cleaning the labs and packing our work stuff. Friday we had a science meeting summarizing what we had achieved and discussing the subsequent work steps required to obtain the scientific results from the material recovered during this cruise. The port of Malaga was reached at 9:00 on Saturday, April 28, and we could pack the containers during the morning.

During cruise POS 522 we worked 57 stations, including 34 gravity corer deployments of which 21 delivered cores, 8 CTD stations, 12 multibeam bathymetric mappings of three seamounts, and 3 barrel dredge tracks. The sediment cores range from 1.5 to 7.5 m lengths yielding a total 73 m core length and are packed full with turbidite and ash layers so that several hundred volcanoclastic layers will have to be analyzed during the continuation of this project.

On Sunday morning, April 29, the scientific team disembarked after we had enjoyed almost three weeks of excellent support and great hospitality by the Poseidon’s crew.



The POS 522 science team.

Back, left to right: Alessio Di Roberto, Alessandra Mercorella, Michael Marani, Asmus Petersen, Giacomo Dalla Valle, Kevin Krohne, Mauro Rosi.

Front, left to right: Marija Voloschina, Armin Freundt, Marco Pistolesi, Kai Fockenberg.