



markers for their population genetic analyses from scratch. Results from these analyses indicate that connectivity does exist between known mussel populations of the Mid-Atlantic Ridge. Nevertheless, these exchanges do not seem to occur directly within one generation, as mussel larvae usually do not reach vent fields that are more than 150 km away from their natal site.

“In turn this means that there must be or must have been other so far undiscovered vent fields or equivalent habitats on the Mid-Atlantic Ridge that serve as intermediate stops for dispersal. We call these habitats „phantom“ stepping stones as we do not know where they are and how they look like”, Professor Thorsten Reusch from GEOMAR, senior author of the study concludes.

The results by Breusing and her colleagues are also relevant as hydrothermal ecosystems contain special sulfide deposits, which represent potential future mineral resources. “When mining of these sulf