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SPOTLIGHT 10 | Northwest Rota-1 Seamount

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First Paragraph

Northwest Rota-1 Seamount is the first place on Earth where a submarine volcanic eruption was witnessed in 2004, and, remarkably, it appears that the volcano has been erupting continuously ever since. NW Rota-1 is located ~ 100 km north of Guam in the western Pacific, within the newly designated Mariana Trench Marine National Monument (<http://www.fws.gov/marianastrenchmarinemonument>) With a summit depth of 520 m, it is a symmetrical cone of basaltic andesite composition (Figure 1) formed in the subduction zone setting of the Mariana volcanic arc. It was identified as a site of particular interest in 2003 when sampling of its overlying hydrothermal plume showed very high magmatic volatile input (Resing et al., 2007). Consequently, it was one of several seamounts targeted for dives with a remotely operated vehicle the following year. During these dives, an actively erupting vent was discovered at a depth of 550 m; lava, fluid, and gas samples were collected; and colonies of shrimp, limpets, and crabs (some of them new species) were found living in the volcano summit's harsh conditions (Embley et al., 2006; Limén et al., 2006).

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