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## SPOTLIGHT 3 | Lō`ihi Seamount

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### Authors

[Hubert Staudigel](#) | Institute of Geophysics and Planetary Physics, Scripps Institution of Oceanography, University of California at San Diego, La Jolla, CA, USA

[Craig L. Moyer](#) | Biology Department, Western Washington University, Bellingham, WA, USA

[Michael O. Garcia](#) | Department of Geology and Geophysics, University of Hawai`i, Honolulu, HI, USA

[Alex Malahoff](#) | GNS Science, Lower Hutt, New Zealand

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## First Paragraph

Lō`ihi Seamount defines the volcanically active, leading edge in the Hawaiian hotspot chain. It is located on the submarine flank of Mauna Loa, 30 km south of the island of Hawai`i. Lō`ihi's summit is at 975-m water depth (Pisces Peak), and the seamount has a pronounced southern rift that extends down to about 5000-m water depth (Figure 1). The summit displays three pit craters (Figure 1), including Pele's Pit (1350-m water depth), the most hydrothermally active crater, which was formed during an earthquake swarm in 1996 (Garcia et al., 2006). Lō`ihi was not recognized as an active volcano until a sampling expedition in 1978 that led to a detailed understanding of Lō`ihi as a juvenile oceanic intraplate volcano; it then became the de facto type location for the first stage in the development of a typical oceanic intraplate volcano (Figure 2; Moore et al., 1982; Staudigel et al., 1984; Koppers and Watts, 2010). Key characteristics of this "Lō`ihi Stage" of ocean island formation include: (1) a very small volume relative to the final completed volcano, (2) a diverse suite of rock types ranging from very alkalic to tholeiitic, and (3) heterogeneous mantle sources. Since then, Lō`ihi has been the focus of substantial scientific research, with numerous sampling expeditions, leading to a detailed understanding of its volcanic history, seismic activity, petrology, geochemistry, and microbiology (see review by Garcia et al., 2006; Emerson et al., 2007; [http://en.wikipedia.org/wiki/Loihi\\_Seamount](http://en.wikipedia.org/wiki/Loihi_Seamount)).

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