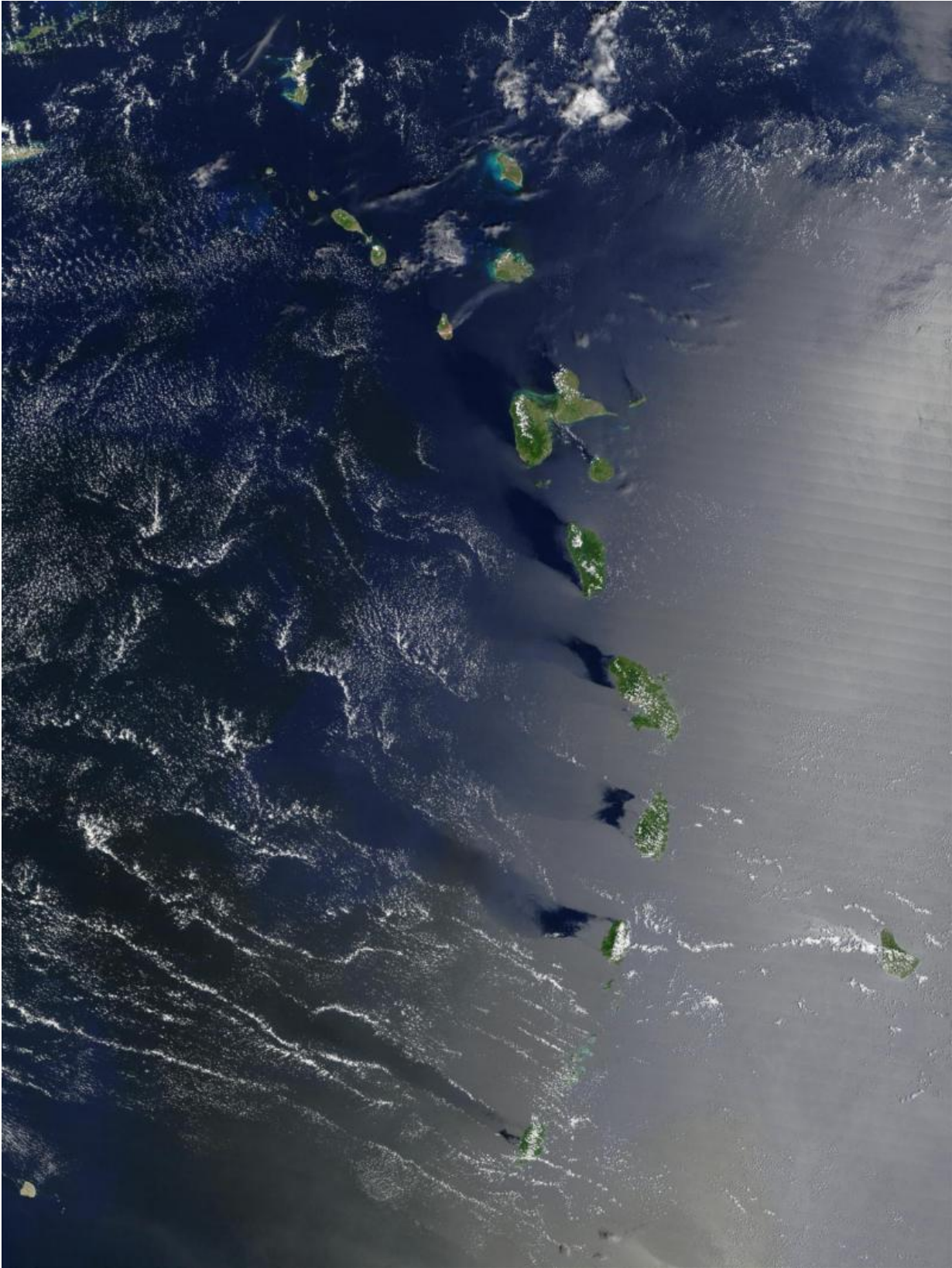


# Evidence of past volcanic activity in the Caribbean Sea

December 23 2015

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The Lesser Antilles island chain. Credit: Jacques Descloitres, MODIS Rapid Response Team, NASA/GSFC.

Reconstructing the magnitude of past volcanic eruptions is important in informing predictions about future eruptions and hazards. This is difficult to accomplish from records on land—old eruptions are often eroded away, buried beneath later eruptions, or obscured by vegetation and soil. Most volcanoes are close to the oceans, so much of the erupted material falls into seawater and accumulates on the seafloor.

More complete records of [volcanic activity](#) can be found in marine sediments. In 2012, Integrated Ocean Drilling Program (IODP) Expedition 340 recovered a 140 meter long sediment core between Montserrat and Guadeloupe in the northeastern Caribbean Sea. This is close to several volcanically active islands in the Lesser Antilles. Most notably, this core contained an 18-cm-thick ash layer that was deposited 2.4 million years ago, and came from Guadeloupe, ~75 km to the east.

Volcanological models indicate this layer derived from a far larger eruption than any subsequently recorded event in the region. While a similarly large eruption would have a major impact on human populations in the region if it occurred today, it is important to note that such events are very rare in the Lesser Antilles, and there is no indication that another large eruption is imminent.

**More information:** Martin R. Palmer et al. Discovery of a large 2.4 Ma Plinian eruption of Basse-Terre, Guadeloupe, from the marine sediment record, *Geology* (2015). [DOI: 10.1130/G37193.1](https://doi.org/10.1130/G37193.1)

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