

## Did drifted pumices on the Sanohama beach, the southeastern part of the Izu-Oshima Island derive from the 2021 Fukutoku-Oka-no-Ba eruption, Japan?

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In August 2021, the eruption of Fukutoku-Oka-no-Ba, a submarine volcano in the Ogasawara Islands, generated a large amount of drifting pumice. The pumices drifted like a raft on the Kuroshio Counter-Current, and after October 2021, they drifted to the Daito, Amami, and Okinawa Islands, and then to the coast of the Kanto region. In late November, it has been reported that they were washed ashore in the Izu Islands, Taiwan and the Philippines. In order to clarify how the morphological characteristics of such drifting pumice change over time from the first drifting, we collected drifting pumices in various places and recorded the physical information of drifted pumices such as morphology, color, structure, roundness, particle size and so on.

There are various forms of pumice among initially washed ashore on the Okinawa Honto which were correlatives of pumices originated from the 2021 eruption of Fukutoku-Oka-no-Ba (Hiramine et al., this conference). Most of the pumice that has washed ashore in various places is well-foamed gray pumice incorporating black enclaves, which are presumed to be highly crystalized part of mafic magma reservoir (Yoshida et al., 2022), which is compared to "chocolate chips". Also, they include clinopyroxene, feldspar and olivine mainly. The chemical composition of volcanic glass, which forms the matrix of pumice, is trachyte (Yoshida et al., 2022; Hiramine et al., this conference).

Based on these descriptive characteristics of pumice clasts originated from of the 2021 Fukutoku-Oka-no-Ba eruption, we are proceeding with verification of whether the above pumice samples collected in various places were pumice derived from the Fukutoku-Oka-no-Ba.

During this step, the pumices collected at the southeastern end of the Sanohama beach in the southeastern part of Izu Oshima on the afternoon of November 17, 2021, were found that the color characteristic of them were different from pumices derived from Fukutoku-Oka-no-Ba. Also, petrographic and geochemical characters of one of them is different from Fukutoku-Oka-no-Ba.

Near the Japanese Islands and around area, the phenomenon of pumice drifting on the sea has also been confirmed in the 1986 eruption of Fukutoku-Oka-no-Ba and the 1924 eruption of Iriomote submarine volcano. In addition, although it was not as large as the above case in terms of the total amount of ejecta or the amount of outflow to the ocean, pumice clasts drifted in the eruptions of Sakurajima in 1914, Hokkaido-Komagatake in 1929, and Myojinsho submarine volcano in 1952, pumice drifting and/or to washing ashore in near beach have been confirmed. On the other hand, Hiramine et al. (2020) pointed out that a part of pyroclastic materials deposited on land flowed into the sea area through various processes, and pumices drift to the beach, even in normal periods when there is no eruption event. It will be necessary to carefully correlate the origin of the pumice clasts collected at the Sanohama beach of Izu Oshima this time, considering various cases.

### references

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