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御嶽山 2014 年水蒸気噴火とその後の侵食

The 2014 phreatic eruption of Ontake Volano and the subsequent erosion

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戦後最大の死者を出した御嶽火山の 2014 年噴火は，総テフラ噴出量 0.7–1.3×10^6 m^3 の VEI スケール 2 の水蒸気噴火であった（Maeno et al., 2016）．この噴火は，新しく形成された火口群から噴煙柱崩壊型の乾燥した火砕サージの発生と多量の弾道火山岩塊の放出が 30 分程度あった後，噴煙が上昇して最高高度に到達し泥雨まじりの凝集火山灰が降下，その後火口から火口噴出型ラハールが流下といった推移をたどった（Oikawa at al., 2016）．本口絵は，この噴火による噴出物の産状やその後の変化を紹介する．噴火により地獄谷内の火口周辺には小型の火砕丘が形成されたが（Fig. 2），その後の台風などにより侵食されて失われた（及川ほか, 2015）．堆積したテフラも噴火後約 1 年の内に侵食は進み，降下テフラが厚さ数 cm 程度積もった地域でも，ほとんど侵食され一部残存するにすぎない（Figs. 3, 4）．降下テフラは，凝集火山灰として降下し，現在，層として保存されている地点では泡入り火山灰として観察される（Fig. 5）．

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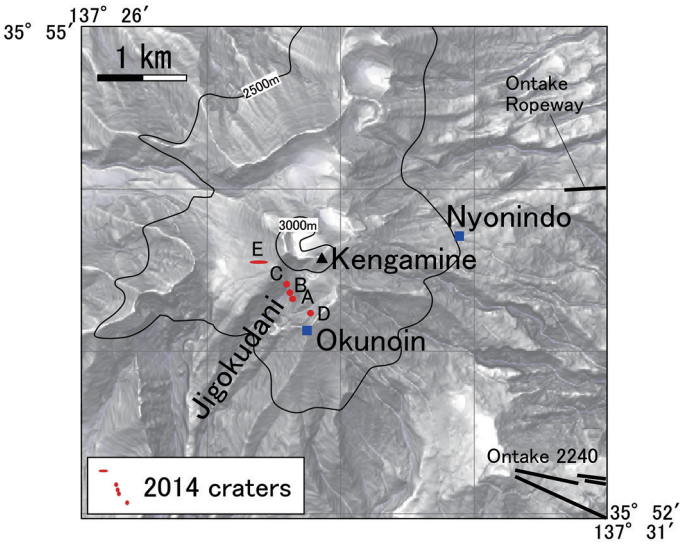

Fig. 1. Location map of Ontake Volcano. The relief map was constructed using topographic data from a digital elevation map (10 m grid) published by the Geospatial Information Authority of Japan. A–E: Crater names (also shown in Fig. 2). Craters A–C are located at the head of Jigokudani Valley.

Fig. 2. Craters of the 2014 eruption at Ontake Volcano, viewed from the south. Photograph was taken by T. Oikawa on September 28, 2014, from a helicopter operated by Chunichi Shimbun. This eruption formed small pyroclastic cones at Jigokudani Valley (A and B).

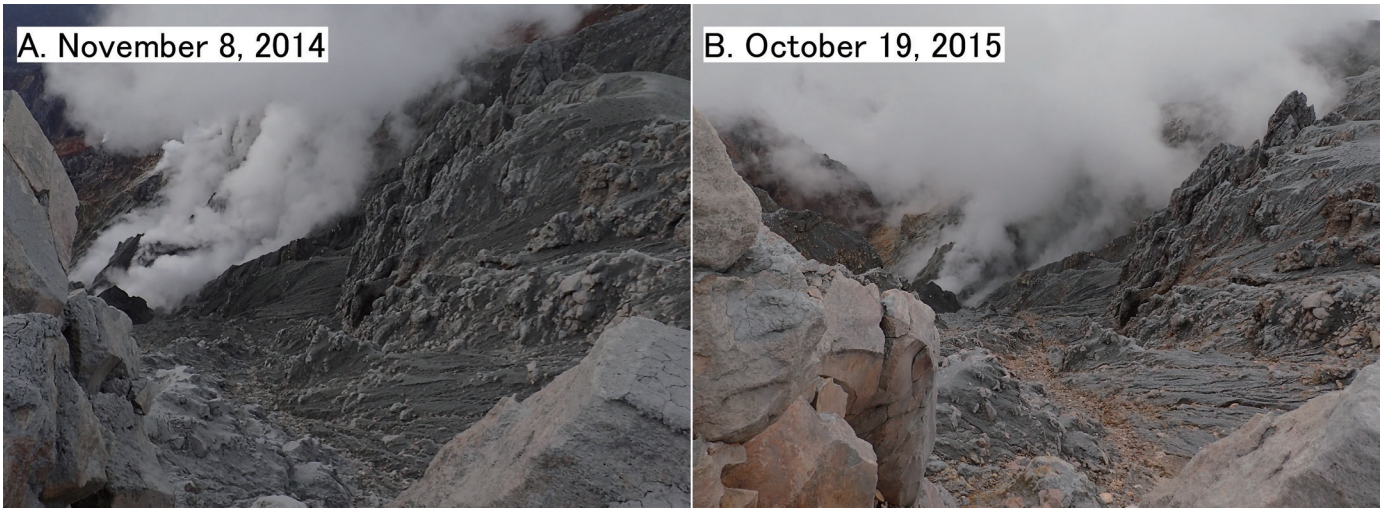

Fig. 3. View of the head of Jigokudani Valley from Kengamine. The 2014 eruption deposited tephra (>1 m thick) at the head of Jigokudani Valley. These tephra deposits were subjected to gully erosion after the eruption.

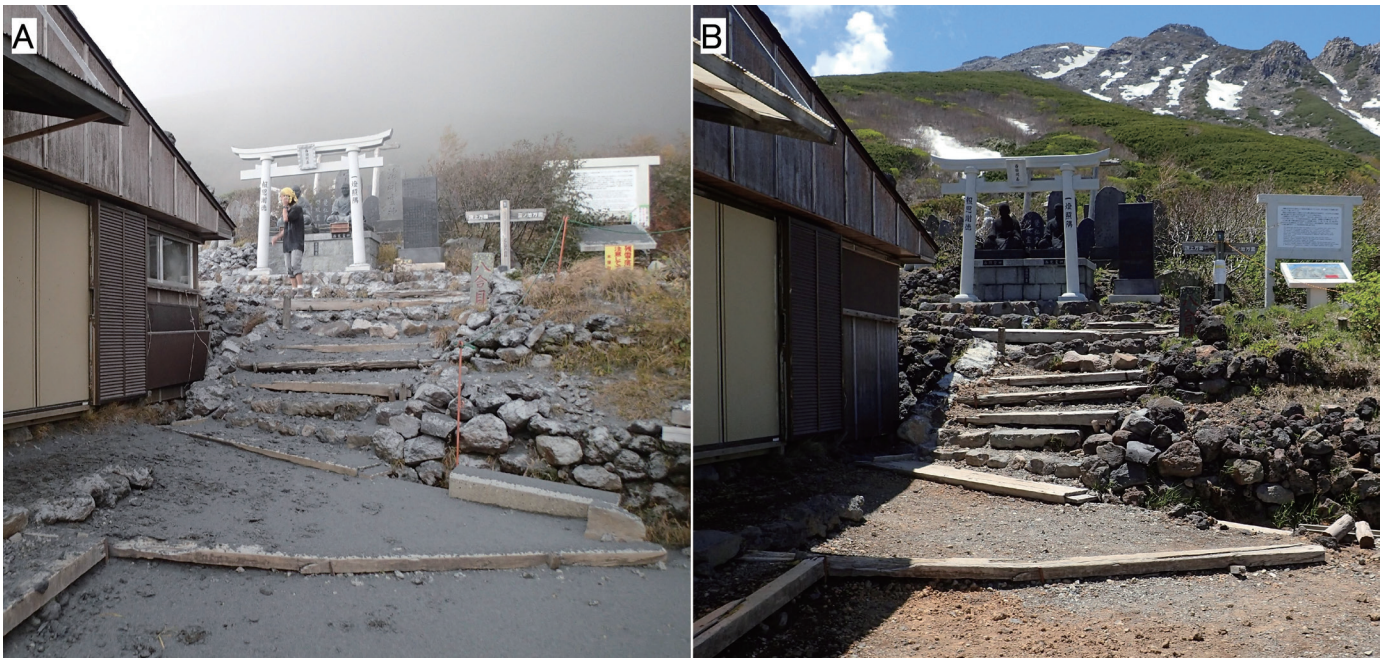

Fig. 4. (A) Photograph of Nyonindo (ca. 2 km from the crater) immediately after the eruption (September 27, 2014, at 12:24 pm). The photograph was taken by S. Tamura. The 2014 tephra layer is ca. 2 cm thick at Nyonindo. The initial tephra fall was dry in the Nyonindo area, followed by wet tephra fall during subsequent rainfall, after about 12:20 pm. (B) Photograph of Nyonindo (June 2, 2016). Most of the tephra deposit has been removed by erosion.

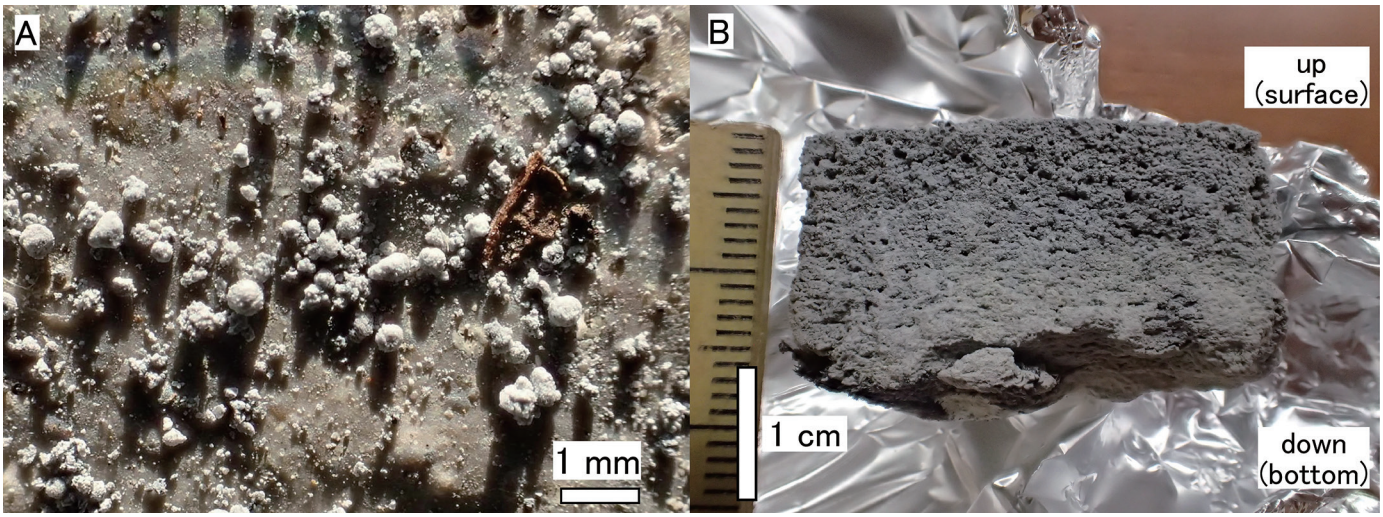

Fig. 5. (A) Aggregate volcanic ash deposited at Jizo Toge (15 km east of the 2014 craters), Kiso-cho, on September 27, 2014. (B) Vesiculated tuff at Nyonindou (2 km east of the 2014 craters). The sample was taken on July 2, 2016.