論　説

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霧島火山，えびの高原周辺における最近 15,000 年間の活動史

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Eruptive History of EbinokogenVolcanic Area of Kirishima Volcanoes for the Past 15,000 Years in Kyushu, Japan

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The Kirishima volcanoes located in southern Kyushu are comprised of more than 20 volcanic edifices. The volcanoes occupy an elliptical area of approximately 330 km^2 with the WNW-ESE direction. Among the different types of volcanic edifices, the typical ones are compound maars and lava flows in Ebinokogen. We studied the volcanic history of Ebinokogen by geological examination of tephra layers and lava flows. After the Karakunidake-Kobayashi plinian eruption, seven tephra were formed in this area. We determined the ages of those tephra and two lava flows. The magmatic eruptions, produced Tamakino B tephra, occurred after Karakunidake-Kobayashi tephra eruption. The first activity in Ebinokogen from about 9.0 cal ka BP generated Fudoike lava flow, and Fudoike-Tamakino A tephra erupted from Fudoike crater. Karakunidake north-Ebino D tephra was generated from the northwest flank of Karakunidake at 4.3 cal ka BP, with debris avalanche and lahars. Phreatic Fudoike-Ebino C tephra erupted from the Fudoike crater at 1.6 cal ka BP. Ioyama-Ebino B tephra eruption started from around the 16th to 17th century with lava flow. Phreatic Ioyama east-Ebino A tephra erupted from Ioyama east crater in 1768 AD. The Ebinokogen area is one of the active regions of Kirishima volcanoes explicated by geophysical observations. Our results indicate cyclical tephra depositions mainly produced by small magmatic and strong phreatic eruptions in this area after the Karakunidake-Kobayashi pyroclastic eruption. Furthermore, the vent locations were found to migrate with each eruption.

Key words: Kirishima volcanoes, Ebinokogen, tephra, eruptive history, historical eruption

1. はじめに

えびの高原は霧島火山の北西部にあり，大小の火山や火口が点在する．周辺には池めぐりの散策コースが整備され多くの観光施設があり，霧島地域の代表的な観光地である．えびの高原は韓国岳（からくにだけ），えびの岳，白鳥山（しらとりやま），甑岳（こしきだけ）によって囲まれ，標高 1100〜1300 m の比較的平坦な地形をなしている (Fig. 1)．この中には，溶岩の表面地形が鮮明な不動池（ふどういけ）と硫黄山（いおうやま）が存在し，若い時代の噴火活動が示唆され，中でも硫黄山は歴史時代に誕生した新しい火山と考えられている (Kobayashi *et al.*, 1981)．しかし，えびの高原の詳細な火山地質学的研究は少なく，露木・他 (1980) の韓国岳崩壊に関する研究や井村・小林 (2001)

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