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THE VOLCANO LETTER

A Weekly news leaflet of the Hawaiian Volcano Research Association

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KILAUEA REPORT No. 792

WEEK ENDING MARCH 16, 1927

Section of Volcanology, U. S. Geological Survey:
T. A. Jaggar, Volcanologist in Charge

Rainy weather has continued through much of the past week at Kilauea Volcano. Dust from slides has not been noticed at Halemaumau pit.

The total number of local earthquakes registered at the Observatory during the week was 14, all very feeble. There are also four records of blasts that were noted and timed. Tremors due to blast are of the same character as the usual spasdomic tremor; they wax to a maximum amplitude about the middle of the disturbance, and then diminish to zero, the whole lasting about 15 seconds. The source is on the Hilo road, about a mile away, where the contractor is using dynamite, approximately ESE from the Observatory, and 15 feet lower.

Probably several of the jarrings counted as earthquakes are also due to this cause, but it is not possible to tell which ones. One definite feeble earthquake had phases sufficiently distinct to indicate an origin 20 miles away. This shock was recorded at 8:50 p. m. March 12, and was also registered on the seimograph operated by Captain R. V. Woods, in Kealakekua, on the other side of Mauna Loa.

The Kona seismograph also made a feeble record of the Japanese earthquake of March 7, noted in last week's Volcano Letter.

Practically no tilt accumulated for the week, as the slight SW tilt of the beginning of the week was compensated in the opposite direction later.

THE ALEUTIAN ISLANDS

The region in Alaska which contains the largest number of volcanoes extends in a continuous curved belt from the Aleutian Range of mountains west of Cook Inlet, through the Alaska Peninsula and the Aleutian Islands, to Attu, the westernmost possession of the United States, where there are warm springs. Volcanoes that have an active record lie along a broad arc 1,500 miles long. There are at least 40 of them, ranging in height from mere islets to Redoubt Volcano, 10,200 feet high. Many of the volcanoes ore symetrically-shaped snow-covered cones, with glaciers on their flanks. All along the belt there are hot springs, and in some places sulphur springs (Mineral Springs of Alaska, by Waring, Water-Supply Paper 418, 1917, U. S. Geological Survey).

The Section of Volcanology is authorized to establish one or more volcano observatories on the Aleutian belt. The greatest recent eruption in Alaska was at Katmai Volacno, opposite Kodiak Island, in 1912. This gave vent to tremendous explosions ejecting bowlders, sand, and dust, and also a very siliceous, stiff, soda rhyolite lava, with about 77.5 per cent silica. This magma is chemically at the opposite extreme from the basic olivine basalt of Kilauea, with 48 per cent silica.

The writer criused from Unimak Pass to Atka in 1907, and learned from traders that lumps of pure native copper had been found on the shore of Copper Island, belonging to the Russians, west of Attu. On Attu is a small village of Aleuts. On Agattu there are high peaks, and all of the islands west of Buldir are believed to be pre-Tertiary rocks.

Following the chain east from here, the southern half of the island belt, comprising the larger land areas in the middle of the chain, consists of ancient igneous rocks, without active volcanoes. The northern half, on the other hand, with the dividing line sometimes in a single island and sometimes separating different islands, consists of shapely, recent, volcanic cones, many of them fuming and some the sites of eruptions during the last 50 years.

Buldir is an eroded volcanic cone, with sunken rocks to the south, where islands are said to have existed prior to eruptions that destroyed them more than a century ago. Kiska has a fuming volcano 4,050 feet high at its north end, it contains a good harbor, and its southern half is geologically different, and said to contain "mineral." Chugul and Little Sitkin are said to be fuming volcanoes, the former containing iron. Amchitka is nonvolcanic, and has good cattle feed. Semisopochnoi is covered with volcanoes, but does not smoke.

We now come to a group of large islands strongly volcanic on their north sides. Gareloi is always fuming. A smoking volcano occupies the north end of Tanaga. The north end of Kanga was very active in 1904. Great Sitkin was reported fuming in 1904, and Kasatochi is said to be the top of a volcano with a big crater lake; about 1899 the lake disappeared, and steam was rising. Copper is reported from near Salt Island on Atka, and sulphur amid the volcanoes in the north of Atka. The writer camped there in 1907, and found a boiling spring, and saw fresh volcanic cinder on snow fields.

Seguam broke into eruption for a week in December, 1891, and this was followed by a terrific eruption in the spring of 1892, making detonations heard at the native village on Atka, 75 miles away, and exhibiting two jets of cauliflower clouds. Mount Cleveland, 8,156 feet high, in the Islands of Four Mountains, was active in 1893.

This brings us to Bogoslof, Makushin, Akutan, Shishaldin, and Pavlof, well known volcanoes with an active record.

The Section of Volcanology of the American Geophysical Union (Bull. Nat. Research Council, November, 1926) conducted a symposium on scientific cooperation in the Aleutian Islands in Washington, April 29, 1926, wherein the need was urged for a permanent cooperative observatory in the large central islands, dealing with volcanology, climate, charting, the sea bottom, geology, seismology, magnetism, and atmospheric electricity. As a beginning, we shall establish a seismograph station at Kodiak in the summer of 1927, and make exploration of the eastern Aleutians. T.A.J.