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Weniaminof
Mak
Aleuten
Penzance

Geographical Society of
the Pacific Trans. Proc.
1933 V3
P. 59-63

The Eruption of the Volcano Weniaminof.

PENINSULA OF ALASKA. # 1934

In the latter part of August, 1892, a great volcanic eruption occurred on the peninsula of Alaska, where very little is known of the geography except the ragged coast line, and the summit outline of the mountain mass behind it, as seen from the southward. Published references to the locality, about latitude 56°, and longitude 159° west, are very limited. We know from Tebenkof's charts that in the peninsula, in this region, where it is about forty miles wide, there are two large lakes hidden among the mountains; that they are connected by a small stream, and that the smaller lake, to the west-southwest, drains into the Pacific waters at Ivanof bay, and the northeastern and larger lake drains into the Bering sea at the native settlement of Meshik, near the Seal Islands. Bishop Weniaminof has only this remark*: "From the harbor of Kuprianof, that part of Alaska lying farther to the east does not belong to the fourth district; and from the journals of Worrokofski, beyond a few soundings and noting down here and there a few rivers, there are seemingly no topographical descriptions. But from the saying of the Aleutes, it is known that beyond or behind Cape Ivanof on the Alaska Peninsula, from the middle of a great back-bone of mountains, there issues smoke in large columns." Vol. 1., pp. 231-232.

Tebenkof, on page 61†, evidently repeats Weniaminof with variations: "From here to the northeastward, the mountains do not appear to stand forth in the same grandeur, and retreat farther from the coast of the Bering sea, but show in the interior of the peninsula their volcanic character, and there is, according to the accounts of the natives, between 158° and 159° long. west of Greenwich, and 56°

*Weniaminof's Description of the Unalaska Districts; 3 vols. 8vo. St Petersburg, 1840.

†Orographical and Geological Description of the North West coast of America and the adjacent islands, by Dr. C. Grewingk. 1 vol. 8vo., with charts. St. Petersburg, 1850.

lat., a place where, from the middle of a mighty mountain ridge, a thick pillar of smoke rises. Concerning this part of the northeast coast, and the interior of the peninsula, there are no accurate accounts, and we know only that northeast from Cape Ajuchta there lies mountainous country, and hear then of the Mt. Tschiginagak, and a coast, rich in glaciers, which stretches even to Mt. Alai." In a foot note, he says of the smoking mountain, that he has named the volcano Weniamínof; and in his second chart has located it in lat. $56^{\circ} 05'$, long. 159° . On page 211 he refers to the volcanic activity along the Aleutian chain, in 1838, when Schischaldin threw out flames, and Makúshin, Akutan, Pavlof and Weniamínof were smoking. On page 204 he quotes Bishop Weniamínof as authority for this volcano's smoking, between 1830 and 1840.

This is all we can collect of the position and description of the Volcano Weniamínof, and it is, therefore, of interest to gather all the particulars of the recent eruption from those who were in the vicinity. From Captain Erskine, commanding the Alaska Commercial Company's steamer St. Paul, we learn that on Sunday, the 28th of August, 1892, when in latitude $53^{\circ} 05'$, longitude $155^{\circ} 52'$ west, on his voyage to the Shumagin Islands, he passed through a black cloud of volcanic ash, so thick that it very nearly obscured the sun from 10 o'clock A. M. to 2 o'clock P. M.; the sea was grey with the fallen ashes, and his decks were covered during his passage of thirty-two miles through it. It had a strong sulphurous odor. He noted the times when the vessel met the cloud of ashes and when it was passed. We have plotted this transit on the accompanying sketch, which is drawn from the chart of the U. S. Coast and Geodetic Survey. At noon the vessel was 223 nautical miles southeastward of the volcano; the wind was moderately light from the northwest, and the sea smooth. He estimated the cloud, as he saw it, to be about one hundred miles long, and from one-half to one mile high. He has furnished us with a bottle of the fine, dark grey dust, as it was gathered from the vessel's deck.

Lieut. John C. Cantwell, of the U. S. revenue steamer Richard Rush, has given us the following memoranda, which he obtained from Captain Applegate, who has been many years in Alaskan waters, and whose vessel was, at the time of the eruption, anchored in the harbor of Ivanof.

On Saturday, August 27, 1892, the schooner Everett Hays, engaged in hunting in the vicinity of the Shumagin Islands, entered Ivanof Harbor, on the southwestern extremity of the Alaska Peninsula, and only 25 miles southwestwardly from the volcano. Capt. J. S. Applegate, the owner, was on board, and states: "About 10 o'clock Saturday night, the weather being calm and clear, a low, rumbling, intermittent sound was heard, and caused the crew to come on deck to ascertain the cause. There was no surf, and the cause was unknown. Between 11 and 12 o'clock, a dark cloud was observed in the sky, towards the northeast, and about 2 o'clock, A. M., this cloud had increased in volume and height until it covered the greater part of the northeast heavens.

"The low, rumbling noise had become a continuous roar, like the blast from a great furnace, and by 3 o'clock lurid flames could be seen amidst the smoke, which was now rising high in tremendous volumes from a single point, being by compass about northeast. The vast column of smoke reached an estimated height of two miles, and then expanded like a great spreading oak. From the lower edge of this great volume, colored flames waved like banners, and vivid flashes of lightning were apparently discharged into the base of the column. This grand display continued, until daylight caused the flames to be somewhat dimmed, but masses of dense smoke continued to roll upward all Sunday. Toward noon a light northwest wind sprang up, and the clouds began to trend to the southeastward, covering the mainland and the adjacent islands with a thick layer of ashes and volcanic dust.

"At the anchorage it was dead calm, and there was no perceptible movement of the sea on the beach, as would have occurred had there been earthquake waves. The continuous lightning discharges were accompanied by deafening peals of thunder, that were plainly heard at the Metrufan village, 50 miles distant, and at Unga Island, 75 nautical miles distant."

Captain Applegate could not get the exact location of the volcano, on account of the high range of mountains, which here approach the sea. The Hays left Ivanof Bay on Sunday, and steered south to Pavlof Island, whence the ash cloud was plainly visible to the eastward until late on Monday, when it gradually disappeared in the southeast.

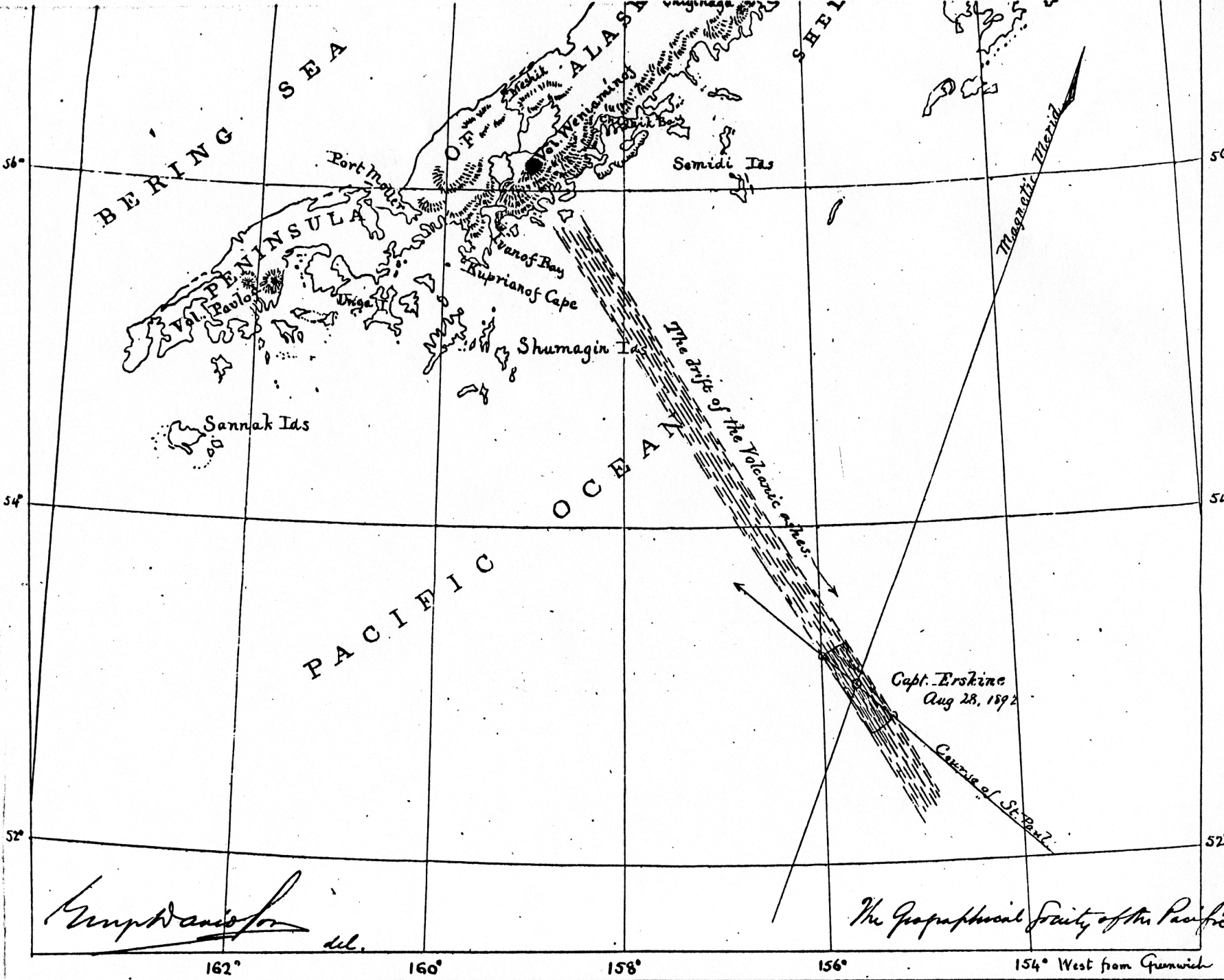
Captain Bowles, of the fishing schooner Fremont, of San Francisco, reports that on Saturday, August 27th, and for seven days after, he was lying at anchor on Slime Bank, in the Bering Sea, in the vicinity of Port Moller, and 60 miles nearly west from the volcano. He observed at the first date what appeared to be a heavy black cloud in the southeast, which he thought foreboded a southeast storm, and took precautions to put his vessel out of its track. On Sunday morning before daybreak, however, he and his crew saw volumes of ruby red and yellow flames bursting forth with indescribable grandeur from the cloud, and heard plainly the reverberations of thunder. The display lasted with unabated energy until Monday morning, when it appeared to die slowly away.

The general character of the volcanic dust has been kindly given to me by Mr. Henry G. Hanks, of the San Francisco Microscopical Society. Color, dark brown; magnetic; before the blowpipe, fuses easily to a glossy black globule, which is magnetic; gives strong iron reaction; heated in a glass tube, gives water and a faint white sublimate, otherwise no change.

Examined microscopically, the particles were found to be very minute, ranging from 0.005 to 0.00025 inch, with every grade between these extremes. All the particles were sharply angular, as if recently crushed. The larger part resembles nearly transparent quartz, the remainder contains a green mineral resembling several varieties of hornblende.

A qualitative analysis shows the presence of silica, oxide of iron, lime, alumina, water. Substances present in small quantities were disregarded.

GEORGE DAVIDSON.



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The Geographical Society of the Pacific

162° 160° 158° 156° 154° West from Greenwich

Capt. Erskine
Aug 28, 1892

Course of St. Paul

The drift of the Volcanic ashes.

Magnetic Meridian

BERING SEA

SEA

GULF OF ALASKA

SEA

KAMCHATKA PENINSULA

Vol. Povoloz

Sannak Ids

Unga

Kuprianof Cape

Shumagin Ids

Port Moller

Baranof Bay

Semidi Ids

PACIFIC OCEAN

56°

56°

54°

54°

52°

52°