The Most Ancient Maps of Erupting Mount Etna

Mount Etna, in eastern Sicily, Italy, is an active volcano on whose slopes are the city of Catania and several towns. The volcano, whose eruptions are noted in written sources dating back to the thirteenth century BC., continues to hold surprises for researchers who examine its eruptive history. During extensive historical research for a new catalog of Etna’s eruptions (E. Guidoboni and E. Bosch, manuscript in preparation, 2008), two maps have been found that previously were unknown in the literature. These maps, which are the most ancient ones that represent Mount Etna erupting, provide new elements to evaluate the eruption that started on 19 December 1634 from 19 December 1634 to at least 17 January 1635. The eyewitness saw the eruption from 19 December 1634 to at least 17 January 1635. The eyewitness saw the eruption from Catania and other villages around the volcano. He declared in the detailed report that he painstakingly observed the sites and that the topographic information he provided is correct, since he had been helped by a local guide who was an expert on the volcano. According to the report, handwritten in Italian in early January 1635, the eyewitness went on a guided excursion close to the active crater.

Along with the report, there is a drawing with notations in Latin. In the graphically elementary watercolor drawing, lava is red, the ground is ochre, and the then perennial “snow zone”—which is now sporadic—is white. Seven locations are localized with a black dot, but only four toponyms are reported.

The report only describes four of the seven lava flows portrayed in the drawing, so the map and the report complement each other with different information. The report notes that only one flow emerged from the crater and that this flow reached as far as the Piano delle Rosselle (Roselle Plain). This is a large concave area where lava accumulated for several days because the path to the south and to Catania was blocked by a hill called Salto del Cane (Dog’s Leap). All of the secondary branches of lava flow of this eruption are thought to have originated from this hill. In the painting, rather than being Mannerist-style drawings or landscape images, they are “scientific” maps that can be used to learn about the 1634 eruption in greater detail.

Map 1: An Apparently Elementary Drawing

Map 1 (Figure 1; 28.8 × 39.5 centimeters), which is preserved in the Biblioteca Nazionale Centrale di Roma (Fondo Gesuitico, number 763), is attached to a handwritten report dated 1635. The anonymous author of the report, who possibly also made the drawing, was an eyewitness to the eruption from 19 December 1634 to at least 17 January 1635. The eyewitness saw the eruption from Catania and other villages around the volcano. He declared in the detailed report that he painstakingly observed the sites and that the topographic information he provided is correct, since he had been helped by a local guide who was an expert on the volcano. According to the report, handwritten in Italian in early January 1635, the eyewitness went on a guided excursion close to the active crater.
however, some of the seven flows stem directly from the crater that had opened. The easternmost flow stretched as far as the territory of Acireale (indicated on the map as Jaco), southeast of the volcano; this information had been unknown in volcanological literature.

In the map, Etna is represented from a fictitious perspective. The volcano’s surface is projected approximately on the flat surface, as though the draftsman had wanted to represent all that had happened, not just what could be seen from a given topographical standpoint.

**Map 2: The Eruptive Scenario 1 Year Later**

Map 2 (Figure 2; 47.3 x 33.2 centimeters) is graphically different from, and more elaborate than, map 1. The monochromatic map is attached to a letter that Jesuit Father Antoine Leal sent from Malta on 18 March 1636 to a Monsieur Dop. In the letter, which is preserved with the map at the Bibliothèque National de France (Occidental Division, Dupuy, number 488, folio 173), Leal states that he had visited Sicily’s most renowned places of worship. During his stay in Catania, on 8 December 1635, he took part in an excursion to Etna, where the eruption that had started in 1634 was still ongoing. His letter indicates that the map best describes the eruption.

Map 2 depicts the trend of the lava flows to the west and east in relation to the Salto del Cane. Furthermore, it depicts 27 local villages, inactive craters, and other areas of the volcano. The map also depicts smoke (or ash?) emitted from Etna’s top crater (confirmed by other written sources [Carrera, 1636]) and its new crater. In addition, the map depicts large, out-of-scale human figures performing religious rites: Thus, the map also bears testimony to the great social and religious impact the eruption had upon the human population already living on the volcano. Having examined written sources concerning this eruption, we feel that map 2 realistically depicts the eruption as it was occurring in December 1635.

This research into Etna’s eruptive history helps to depict past eruptions there in a more detailed and accurate manner. The research also could contribute to improving local hazard and risk evaluations.

**References**


Carrera, P. (1636), Il Mongibello descritto da don Pietro Carrera in tre libri, nel quale oltra diverse notitie si spiega l’istoria degli incendi e le cagioni di quelli, 204 pp., Rossi, Catania, Italy.


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