Historical Activity of Mt. Etna and Aeolian Islands

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MT. ETNA

Etna is a very active volcano that has profoundly influenced the lives of people living on its flanks since ancient times. Its activity has been documented since the beginning of recorded history, i.e. from Greek and Roman civilizations, giving volcanologists a uniquely long historical record for an active volcano. The oldest eruption found in the historical sources was reported by Diodoro Siculus as a strong volcanic event that occurred before Greek colonization (734 BC). Due to this eruption, the Sicani inhabitants resettled in a safer region in central Sicily.

Descriptions of the eruptions in Greek and Roman times are often linked to legends, such as those told by the philosopher Empedocles, or to important historical events, such as Julius Caesar's death in 44 BC. In most cases, information about volcanic activity must be translated from poetic language into hard fact.

Some of the flank eruptions were characterized by intense Strombolian activity and fire fountaining associated with the lava flow emplacement. This explosive activity formed pumice columns and copious tephra and ash fallout on the volcano flanks. Premagmatic deposits built large scoria cones (e.g. Monte Rossì 1449 eruption, La Montagnola 1763 eruption). Similar activity also occurred during the 2001 and 2002-03 eruptions.

AEOLIAN ISLANDS

The Aeolian archipelago consists of several islands and several small islets entirely made up of volcanic products. The island chain extends for about 160 km offshore the northern coast of Sicily. It represents the emerged part of an eructive volcanic structure, located in the Southern Tyrrhenian Sea, along the western margin of a distorted sector of the Megaride-Anacapri rift, namely the Salina-Creta-Peloritani Arc.

Many eruptions of Stromboli and Vulcano are reported in the historical chronicles, while only one took place on the island of Lipari in the 6th century AD.

LIPARI

At present, the volcanic activity on Lipari is restricted to post-volcanic phenomena, i.e. some low-temperature fumaroles and the hot springs of S. Calogero in the western part of the island with a temperature of 70°C.

The island is still active. The last eruption event, represented by the pyroclastic flow of Rocca Rossa and Forgia Vecchia, and by the mass of pumice of Monti Pelato, was recorded in 6th century AD.

STROMBOLI

Stromboli is the northernmost island of the Aeolian Archipelago and the only one which is presently in a persistent state of activity. Between 1874 and 1916 the Italian Navy daily visually monitored Stromboli's eruptions from the San Martino observation station located 1.7 km north of the crater.

These data, together with many other scientific reports that have been published since the 18th century, provide several information not only on the characteristics and on the frequency of the different eruptive phenomena but also on the volcanic risk.

VULCANO

Vulcano consists entirely of volcanic rocks and, together with Stromboli, is the only one showing evidence of very recent volcanic activity. Two active volcanic structures, namely La Fossa and Vulcanello, repeatedly erupted during historic times, mostly showing explosive characteristics.

The last "vulcanian" type of eruption occurred at La Fossa Cone in 1888–89. Numerous historical reports, since Greek and Roman times refer to the activity of this volcano, but only the last eruption occurring in 1888–1890 has been described in detail - Mercalli & Silvestri, 1891.