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Liceo Statale G.Lombardo Radice - Catania

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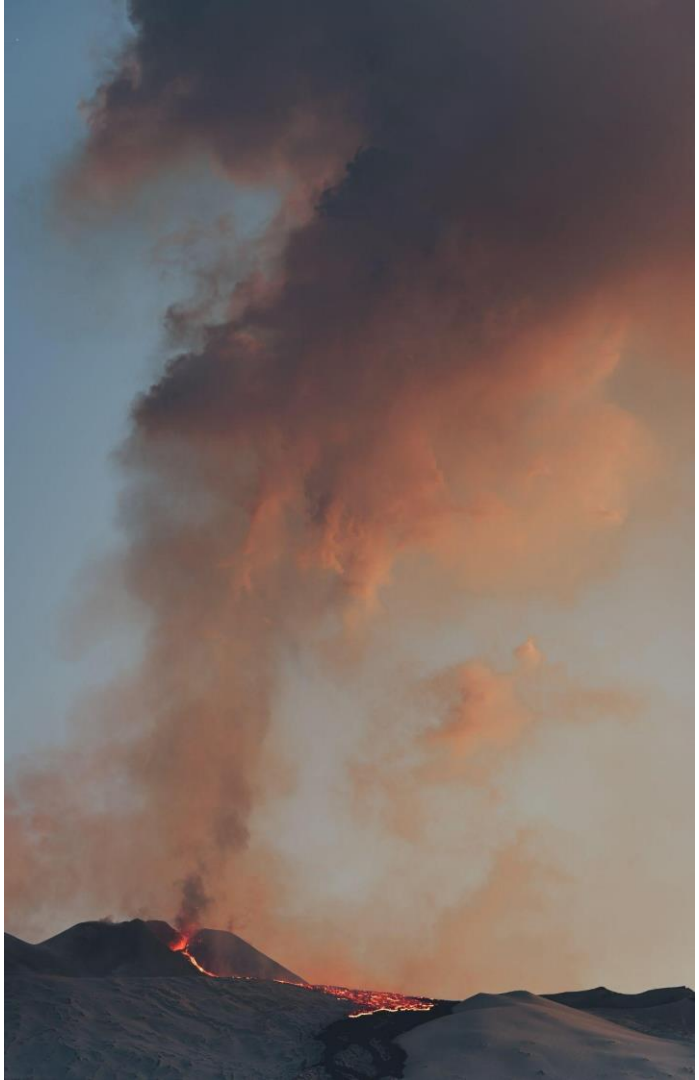
An historical overview from ancient time to today

Under the Volcano

Prof.Piero Mammino

Do you remember / **STAGE**know any words

Understanding the context



PRESENTATION on

this subject?

SCAN ME

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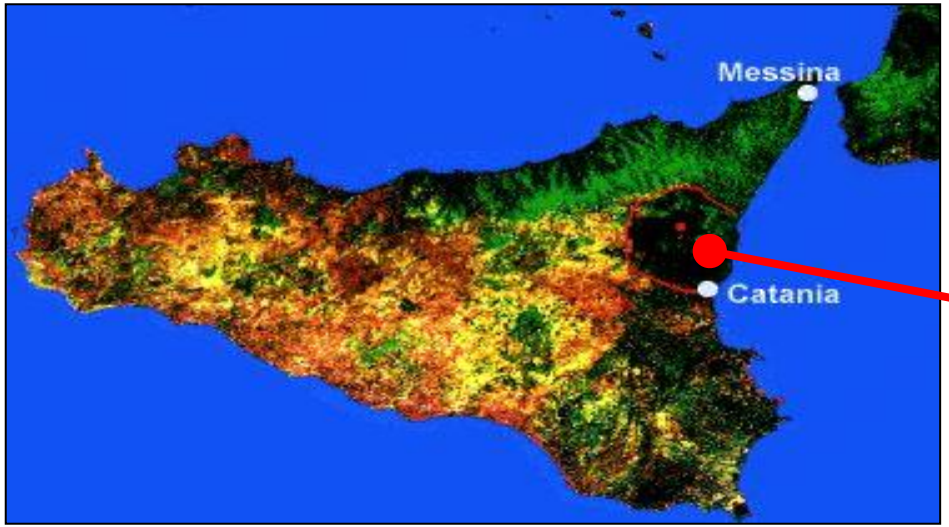


Etna is the largest active volcano in Europe.
It is one of the most active volcanoes in the world.

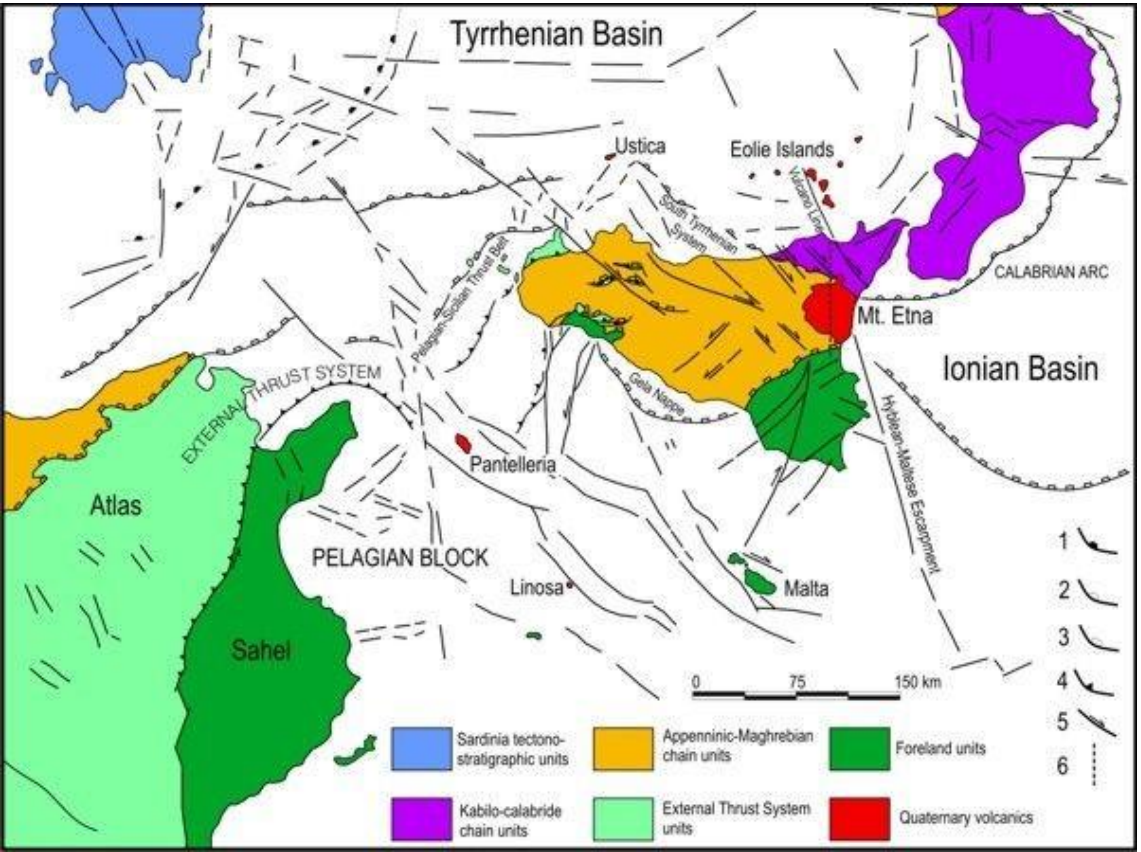
Location: 37.734 ° N, 15.004 ° E

(along the eastern coast of Sicily)

Height above sea level: approximately 3,357m in 2021

Total area: 1,200 square kilometers

ETNA: A NATURAL BORDER



Mount Etna is located in correspondence with the **continental collision zone** between the Euro-Asian plate to the north and the African plate to the south.

Etna is surrounded by two important

ETNA: A NATURAL BORDER

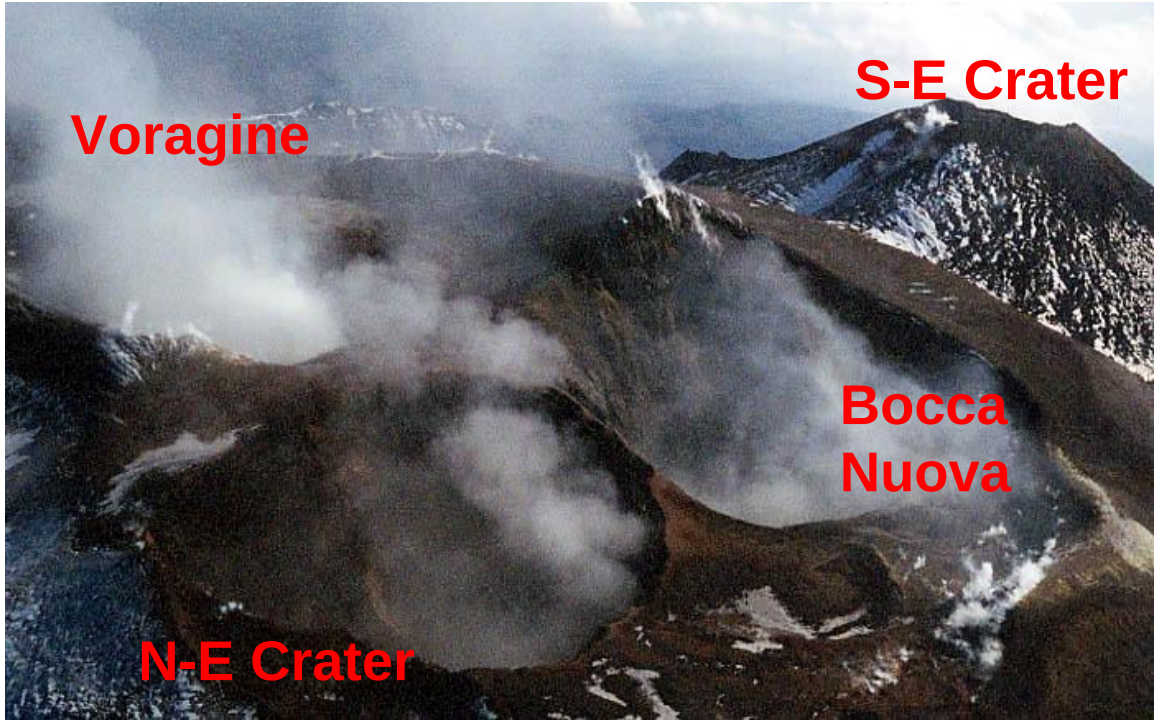
rivers, the **Simeto** and the **Alcantara**. The main source of water is given by the melting of the snow that accumulates on the volcano during the winter.

Alcantara gorges

GLOSSARY

VOLCANIC CRATER:
an approximately circular depression caused by volcanic activity. It is typically a bowl-shaped feature. During volcanic eruptions, it is the place where the gases escape into the atmosphere and the magma is erupted as lava.

Etna has four always active craters (Bocca Nuova, Voragine, North-East, South-East)

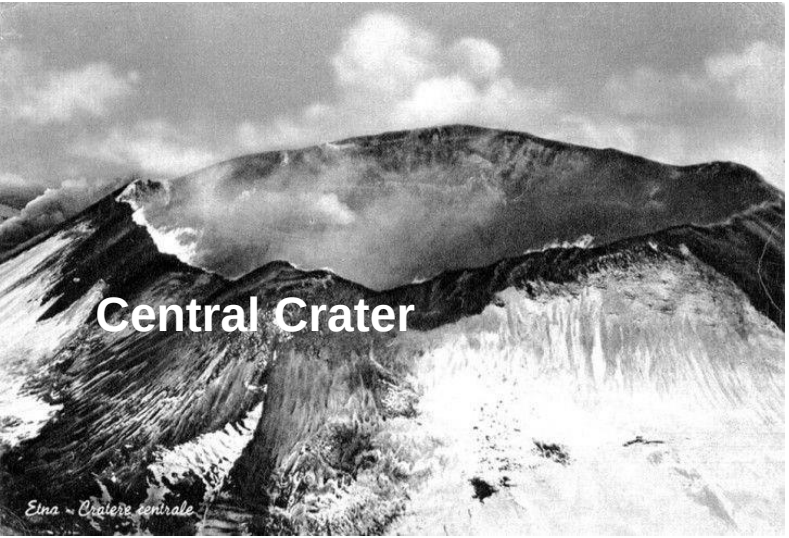


A CHANGING LANDSCAPE

The top of Mt. Etna is made up of **four active craters**.

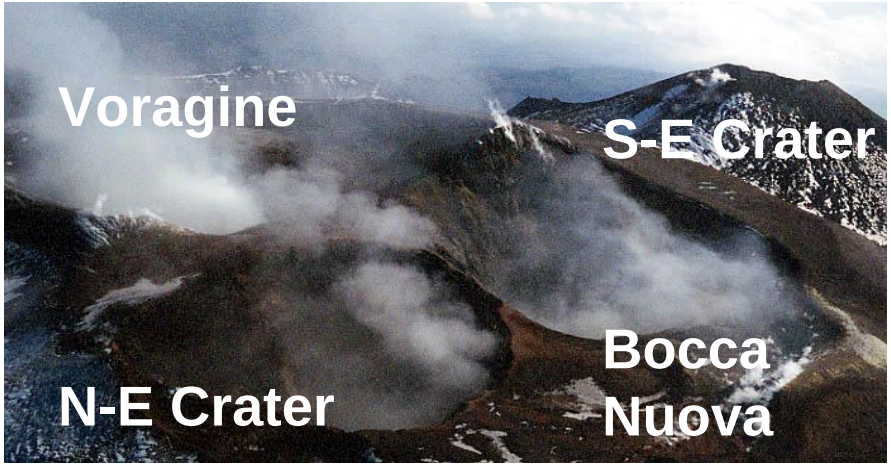
The four summit craters are:

- the **Voragine** and the **Bocca Nuova**, which were formed inside the Central Crater respectively in 1945 and 1968,
- the **North-East Crater**, which has existed since 1911,
- the **South-East Crater**, born in 1971, which has recently been the most active of the four craters.



Etna summit area in 1910

Current Etna summit area



GLOSSARY

CALDERA:
a large volcanic depression, more or less circular in shape. They are generated by a collapse or by an explosion.

Valle del Bove is the name of the main caldera of Mt. Etna

ETNA:

A NATURAL BORDER

The “**Contessa**” is a lenticular cloud that is generated when the prevailing and colder winds coming from the northwest meet the humid and warmer winds coming from the east while they are rising up the slopes of Etna within the Valle del Bove

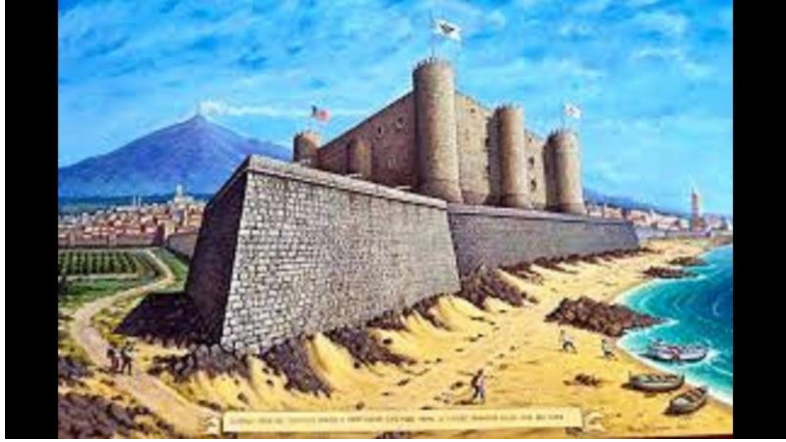
GLOSSARY

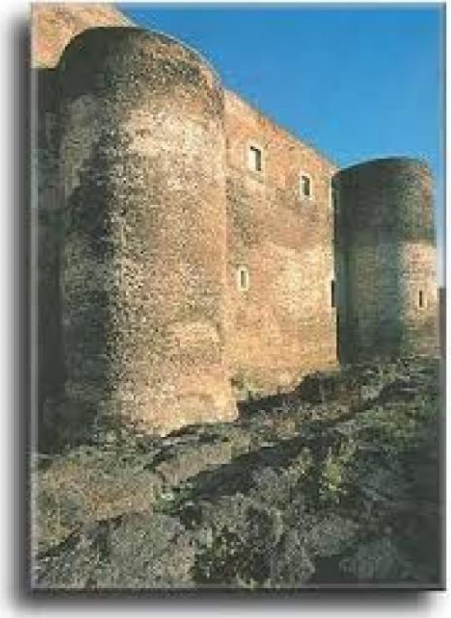
EFFUSIVE ERUPTION:
a type of volcanic eruption in which **lava** steadily flows out of a volcano onto the slopes.

LAVA:
molten rock coming out of a volcano

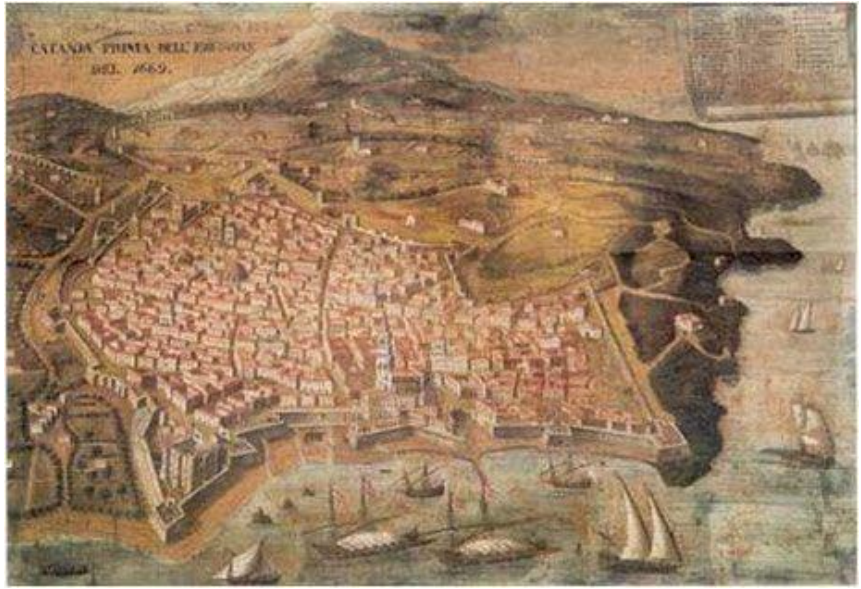
A CHANGING LANDSCAPE: THE ERUPTION OF 1669

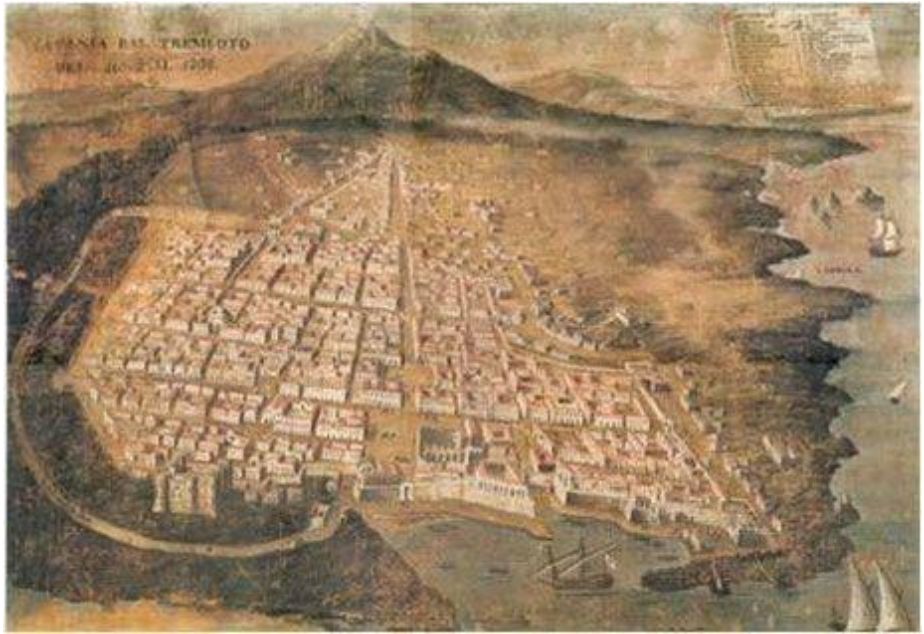
The eruption of **1669** constitutes the most destructive eruptive event known of the historical period. During this eruption the lava flow completely destroyed nine villages and only a small part of the western portion of the city of Catania. The lava flow reached the coast, surrounding the Ursino castle.





A CHANGING LANDSCAPE: THE ERUPTION OF 1669





The city of Catania before and after the eruption

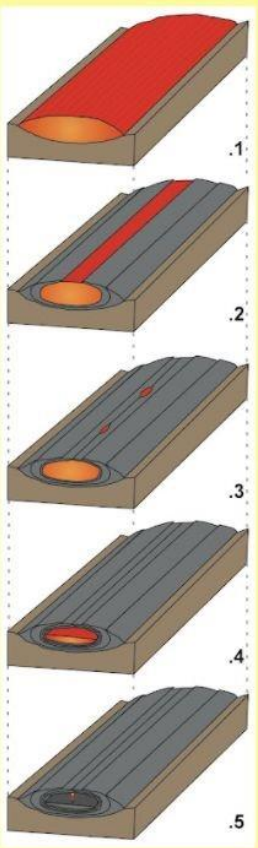
BETWEEN MITH AND REALITY

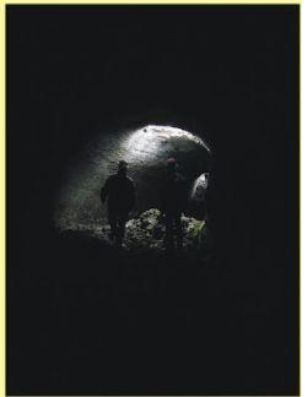
In 1444, a severe lava eruption occurred at low altitude. The lava was about to hit a village located a few kilometers from Catania. The monk Peter Jeremiah, followed by the clergy and all the people, brought the Veil of the Holy to the fire. The lava, miraculously, changed direction.

In March 1669 (and until June), **one of the most impressive lava eruptions of Etna** that history remembers began. The magma came out quickly heading menacingly towards Catania. In April, the river of fire was at the gates of the city. The people of Catania gathered around the relics of Sant'Agata. The Ursino Castle was surrounded by lava but, with great surprise, it changed direction once again.

In **1886** an eruptive mouth had opened in Nicolosi, a town on the slopes of Etna. Blessed Cardinal Dusmet, on May 24, carried the **veil of St. Agatha** in procession and, although the procession had stopped in a downhill stretch, the lava magma stopped immediately

A CHANGING LANDSCAPE: THE LAVA TUNNELS





Etna also changes the underground landscape

The upper surface of the lava flow begins to cool, and the lava beneath continues to flow in tubular conduits beneath the surface

GLOSSARY

EXPLOSIVE ERUPTION: a violent type of volcanic eruption. Lava is crashed in **volcanic ash** at the vent.

Volcanic ash is sent up to 12 km into the atmosphere.

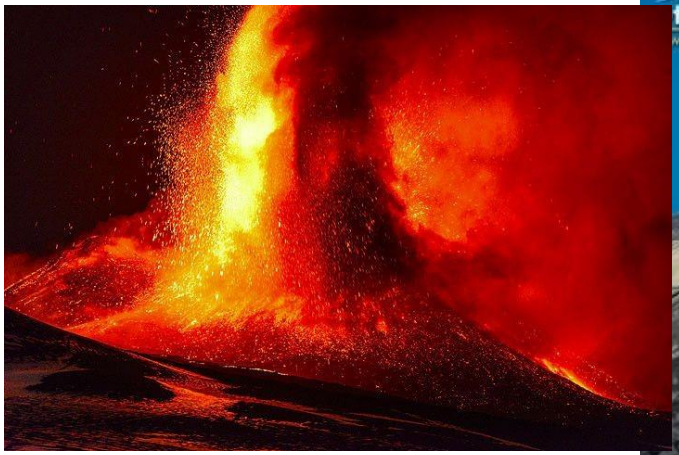
VOLCANIC ASH:
a mixture of rock, mineral, and glass particles expelled from a volcano during a volcanic eruption.

An explosive eruption on Mt. Etna is called **paroxysm**

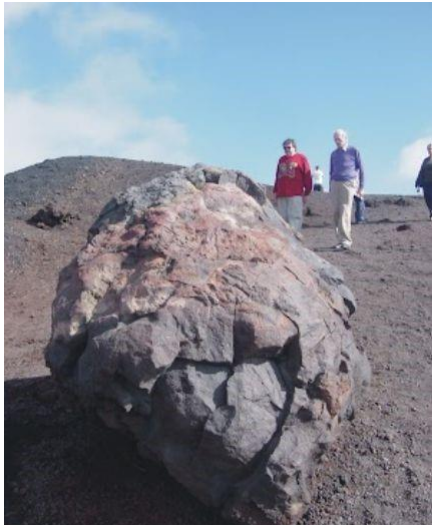
A CHANGING LANDSCAPE: THE SOUTH-EAST CRATER

At the end of each paroxysm,

the southeast crater changes its shape



GLOSSARY



CINDER CONE
(or SCORIA CONE):
a steep slope conical hill of fragments of lava, such as volcanic bombs or volcanic ash.

a mass of molten rock larger than 64 mm, formed during an explosive eruption

The most famous group of cinder cones is **Crateri Silvestri**, built during the 1892 eruption at about 1,900 m

VOLCANIC BOMB:

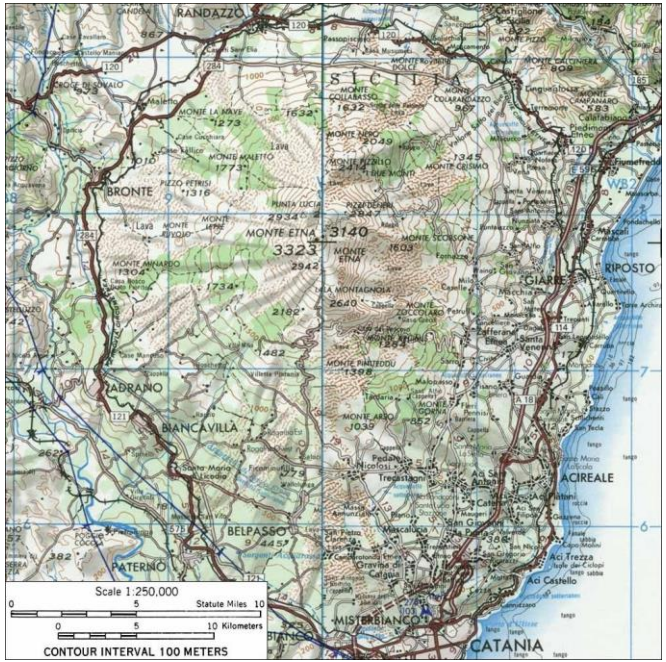
Huge volcanic bomb erupted
during the eruption of 1892

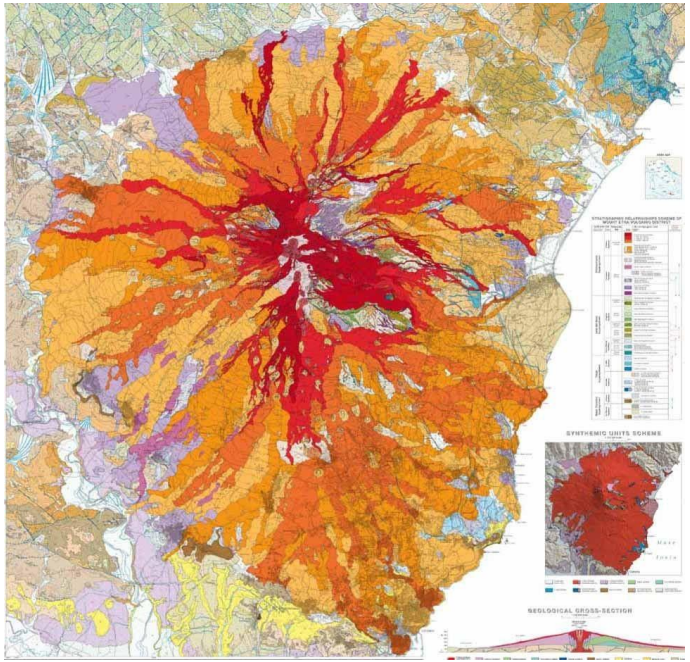
A CHANGING LANDSCAPE:

THE ERUPTION OF 2003

The most recent cinder cone (called **Cratere Barbagallo**) was built
during the eruption of 2003 at about
2,900 m

PRACTICE STAGE





By consulting both topographic and geological maps of Mt. Etna, students will identify places and volcanic phenomena described during the presentation stage.

PRODUCTION STAGE

Students will complete a crossword puzzle using text and images. The crossword puzzle will be offered in both print and digital format

1- A large volcanic depression generated by a collapse or by an explosion 2- Molten rock coming out of a volcano

A volcanic crosswords puzzle

3- A mixture of rock, mineral, and glass particles expelled from a volcano during a volcanic eruption 4- What's that? (picture n. 1) 5- What's that? (picture n. 2) 6- The name of this type of eruption on Mt. Etna (picture n. 3)