

## Living in the shadow of Italy's volcanoes

### Where are the Aeolian Islands?

The Aeolian Islands are a group of eight volcanic islands that lie off the northern coast of Sicily (Figure 1). Whilst they are all of volcanic origin, only one (Stromboli) is currently volcanically active. The islands of Vulcano and Lipari have a record of historic eruptions and the island of Panarea has fumarole activity (Figure 2).

The largest island is Lipari, which is the main administrative centre for the islands (with the exception of Salina). The highest peak is Monte Fossa delle Felci on Salina, rising to 960m above sea level, followed by Stromboli (924m a.s.l.).

### Figure 1

Satellite photo of the Aeolian Islands



<http://www.ct.ingv.it/en/aeolian-islands.html>

## The Aeolian Islands

**Figure 2**

The Aeolian Islands



Image source: <http://www.worldatlas.com/webimage/countrys/europe/aeolian.htm>

### **Volcanic activity on the Aeolian Islands**

The volcanic activity on the Aeolian Islands results from processes operating at a destructive plate margin. The African Plate is moving north-eastwards and subducting beneath the Eurasian Plate (Figure 3). Figure 4 is a simplified cross section showing the formation of the Aeolian Islands. You should be able to work out what the Italian words mean!

The most active volcano is Stromboli. Its craters produce explosive volcanic activity every 20-35 minutes. Such frequent fiery eruptions are referred to as Strombolian eruptions, named after the volcano. During the eruptions, which resemble a fireworks display, volcanic bombs are hurled through the air producing characteristic traces best seen at night (Figure 5).

The main hazard on Stromboli is thought to be a potential large-scale collapse of the Sciara del Fuoco, the currently active vent. Scientists are concerned that a collapse into the sea could trigger a tsunami which could cause damage to the islands of the Aeolian archipelago or the Sicilian coast.

**Figure 3**

Stromboli's plate margins

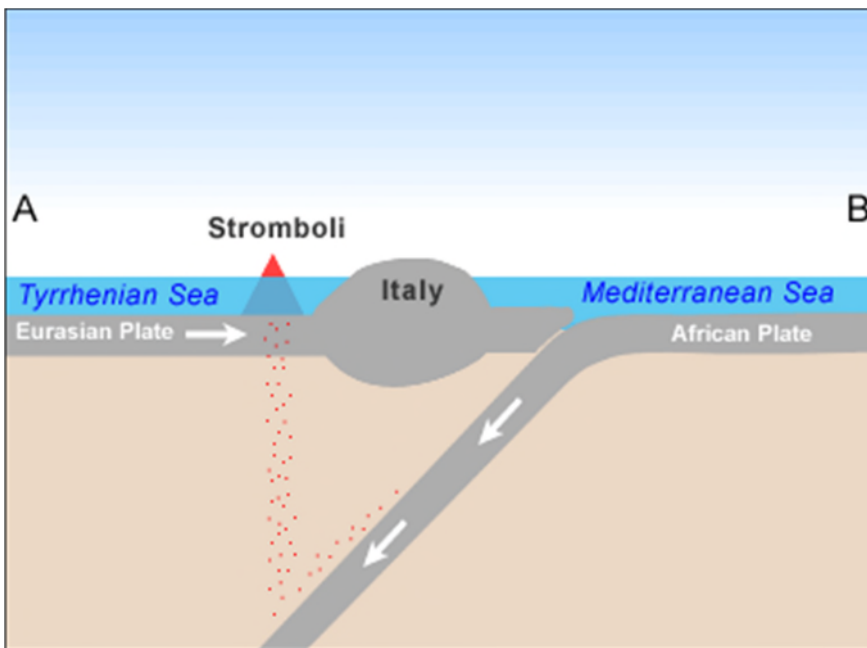


Image source: <http://geology.com/volcanoes/stromboli/>

**Figure 4**

Simplified cross section through the destructive plate margin

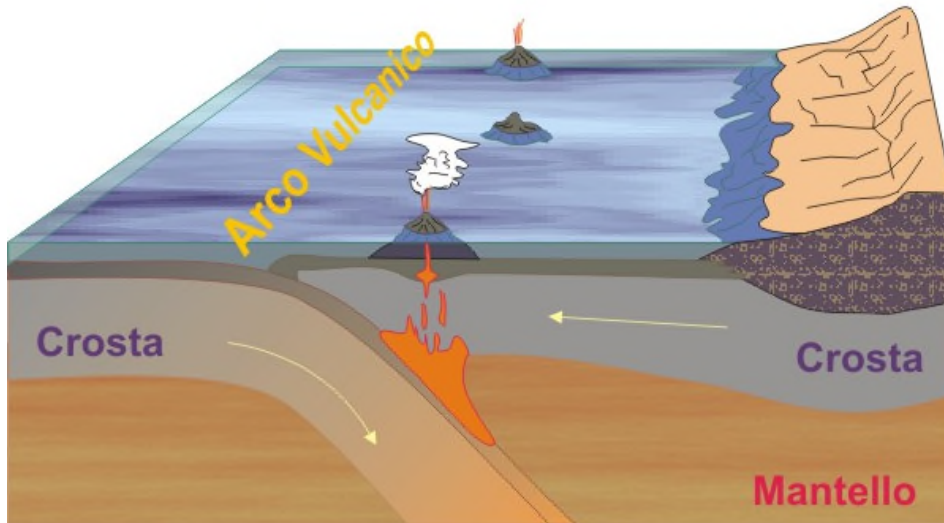


Image source: [http://www.ct.ingv.it/en/?option=com\\_content&view=article&id=72:lattivita-delle-isole-eeolie&catid=18:informazioni-vulcanologiche&Itemid=86&lang=it](http://www.ct.ingv.it/en/?option=com_content&view=article&id=72:lattivita-delle-isole-eeolie&catid=18:informazioni-vulcanologiche&Itemid=86&lang=it)

**Figure 5**

Eruptions of Stromboli volcano



Image source: DTWE

## The Aeolian Islands

Volcanic activity on other islands includes:

- The last eruption of Vulcano took place in 1888-1890. During this explosive eruption about five metres of pyroclastics were deposited on the summit (Figure 6).
- On Lipari, the last eruption dates back to 580 BC.
- In recent years, the partially submerged caldera of Panarea showed signs of significant de-gassing raising fears of a resumption of volcanic activity.

### **Figure 6**

The island of Vulcano

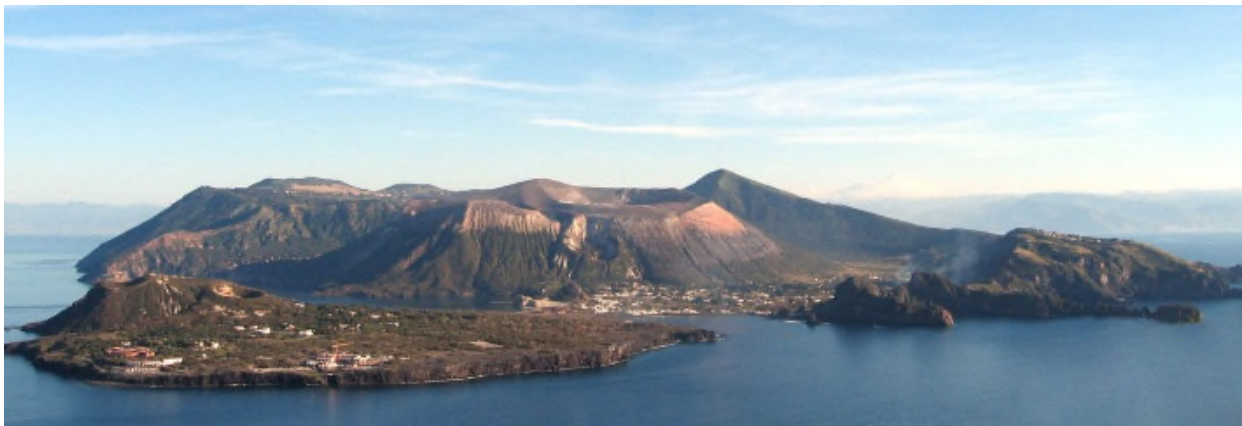


Image source: [https://en.wikipedia.org/wiki/Vulcano#/media/File:Isola\\_vulcano.jpg](https://en.wikipedia.org/wiki/Vulcano#/media/File:Isola_vulcano.jpg)

### **Tourism in the Aeolian Islands**

Today the islands are popular destinations for tourists both from Sicily and from mainland Italy. Many visitors plan to spend part of the evening or night on Stromboli in order to watch the spectacular fiery eruptions.

Lipari and Vulcano are easily accessible by ferry from Sicily and they offer a wealth of geological and archaeological attractions. Lipari's museum boasts one of Europe's finest collections of ancient treasures, whilst there are also thermal baths, dramatic coastlines and pumice quarries. On Vulcano, tourists can visit the Grand Crater and thermal mud pools (Figure 7).



**Figure 7**

Vulcano's mud pools



Image source: DTWE

**Questions**

1. Explain the formation of Stromboli volcano. Include your own copy of Figure 4 and try to add some additional labels or annotations.
2. What are the attractions and possible hazards associated with the eruptions of Stromboli?
3. Use the Internet to find out more about the attractions for tourists of the island of Vulcano. Is this somewhere that you would be interested to visit and why?
4. Consider Vulcano's sense of place. What are the island's unique characteristics?