

# EROSION PHENOMENA ON THE OLYMPUS MOUNTAIN, NORTH GREECE

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Mount Olympus is located approximately 80km SW of Thessaloniki, the capital of Macedonia, Northern Greece. The highest peak of the Olympus (Pantheon), where the Ancient Greeks had placed the abode of Zeus and the Olympian Gods, has a height of 2,917m. This peak is surrounded by two more of similar height (Mytikas 2,911m., Scholio 2,802m.).

The most striking characteristic of the Olympus is that such a height is situated no more than 18km away from the sea, at a horizontal distance. This makes it one of the most precipitous seaside mountains in Europe (cf. Fig. 1).

This fact, combined with the presence of the sea, accounts for the extremely wide variety of climatic factors, that differ according to height. In the first 1,400-1,500m, Mount Olympus has the highest rain level in the Mediterranean, while in the valley situated right below its highest peak (Ennipeas Valley), the mean value of thunders recorded per year is 2,138 (cf. Fig. 2). No wonder Ancient Greeks believed that this was the abode of Zeus, the father of Gods, who cast thunder and lightning on men.

However, climatic factors do not only vary according to height, they also vary according to the time sequence. In other words, extremely rapid changes in weather can be seen quite often and there is consecutive sunshine, fog, clouds, rain, and sunshine.

The above climatic variations, according to height and time, result in an extremely aggressive erosion phenomenon on the slopes of Olympus. Thus,

despite the fact that the rocks on Olympus are hard (marble, limestone, etc.), due to the presence of the mechanism described above, important torrent effects can be seen, such as weathering, erosion of old clastic deposits and debris, minor landslides, etc, which are further aggravated by the permanent presence of snow (freezing, melting, etc). These torrent effects are most obvious in the areas of activity of the numerous torrents that scour the sides of Olympus, the biggest of which include Zelianna, Topoliani, Ennipeas, Xerolakkas.

This paper deals with an in-depth research of these erosion phenomena and examines the effects climatic factors in the area have on these phenomena, both individually and collectively.

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Figure 1. Weathering effects on Scholio peak (2,802m). The coastline is discernible in the background



Figure 2. The valley of Ennipeas. Weathering effects are clearly visible in the right-hand corner

