

Fig.14 The first order tectonic structures separate the calcareous mass in 'macroblocks'.

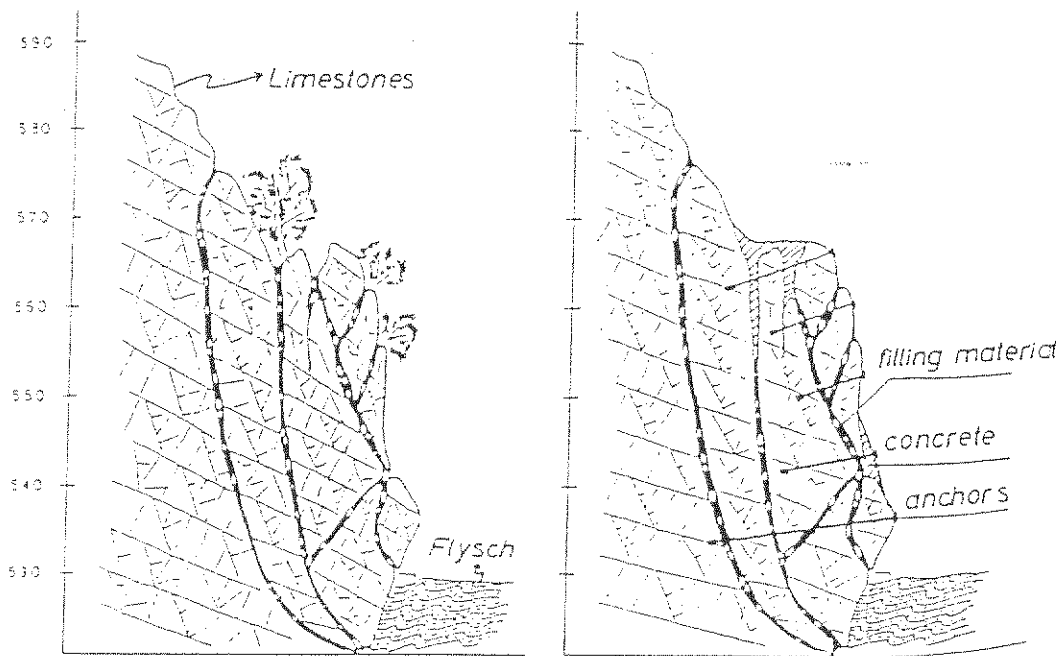


Fig.15 Some probable solutions for controlling the rockfalls in the area of Pedriades. (MONOKROUSSOS-PAPADAKIS 1985).



Fig.16 The trees as indicators of creep phenomena.

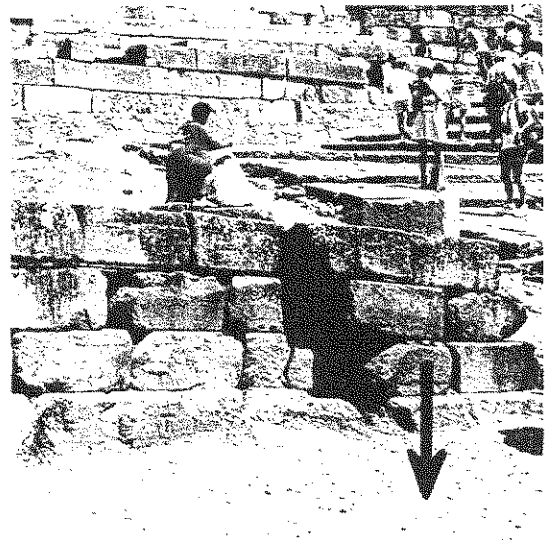
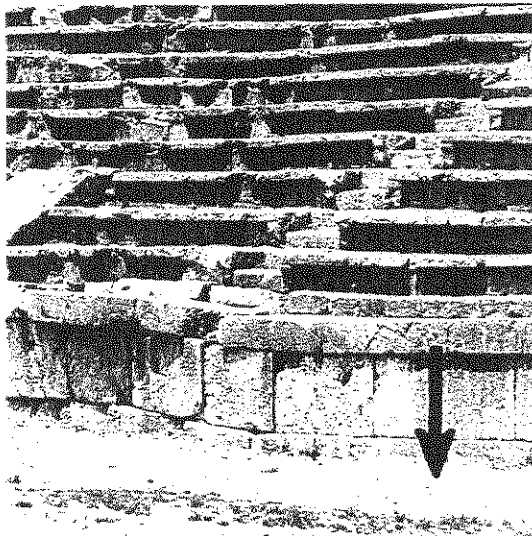


Fig.17 Subsidence phenomena and the destructions that have been caused in the ancient walls.

Creep phenomena have been observed mainly, west of Kastalia spring, west of the Theatre and in the region of Stadium (fig.2). In many cases the trees are indicators of these phenomena. The kind and the nature of the soils (clays, including pebbles or fragments of limestones), the kind and the nature of the basement (flysch formation, alternations of pelites, marls and sandstones) and the fluctuations of the groundwater represent the main factors, under the influence of which, the creep phenomena can take place.

The evolution and the development of these processes is generally continuous and slow, but differs from place to place and site to site as it is proved by the different curving of the trees.

The subsidences are also very common phenomena in the area of the archaeological site, while the basement of the ancient constructions is mainly the screes and the flysch formation which include a lot of clay intercalations and fragments of limestones, so they present very bad and unfavourable geomechanical properties. The behaviour of these formations is also very bad under the seismic load and a lot of deformations can be caused. It is remarkable that in some cases there is a linear arrangement of these phenomena, so they seem to be connected with some faults and fault zones in the area.

The detailed lithological mapping of the post alpine formations, the study of the flow of the ground water, the determination of the depth of the basement and the study of the geomechanical properties of the soils, are under development for preventing and controlling both the subsidence and creep phenomena.

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