



Universidad de Jaén

JAÉN CLIMATE

Clima Jaén Climat Jaén

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During this project, various activities were carried out, focusing on the study of climate change based on the monitoring of caves around Jaén. In addition, the radon concentration was measured in different areas of the Institute to check which areas have the highest concentration and their similarities to natural caves. This radiation is not dangerous, unless someone is exposed to it for too long, as cave guides could be.

The main activity we carried out was a visit to the Cueva de los Murciélagos (Mancha Real). Thermometers were placed at different points in the cave to observe that, in the part of the cave most isolated from the outside world, there was less contrast in temperature. We found that the lowest temperature was around 9°C, recorded at the innermost point of the cave.

The results obtained this year were compared with those obtained by other students in the 22-23 and 23-24 school years. As a result, we have a better understanding of how caves work and their value as areas for

quantifying climate change.

Key words: Climate change, radon, thermometers, contrast, underground.

MATERIALS:

- A radon detector, used near rocks to observe the amount of radon present. Depending on ventilation, this value changes and can become dangerous for guides. cave
- Special thermometers, used to compare the temperature inside and outside the caves.
- A hard hat, to protect us inside the cave.
- A headlamp attached to the helmet, to guide us through the cave.







Fig. 3.- Theoretical seminar-

Fig. 4.- Path to the cave

Fig. 5.- Cave entrance



Fig. 6.- Work in the Cueva de los Murciélagos (Mancha Real).

Fig. 2 - Plan of the cave studied.

ROQUIS CUEVA DE LOS MURCIELAGOS

PLANTA GENERAL

<u>GOALS :</u>

1) Compare the temperature and radon concentrations in the basement of the IES and in a natural cave.

2) To find out the parameters that determine the degree of insulation of a cave and its value for the study of climate change.

3) Monitor the Cueva de los Murciélagos (Mancha Real, Jaén).

4) Compare data from other years.

RESULTS:

Cave flora and fauna

During the cave expedition, we encountered several species of plants and insects, which were analysed and photographed using the Biology and Geology Department's new trinocular magnifying glass.

Temperature measurements (red line: outside; blue line: innermost thermometer; black line: precipitation).



Fig. 8 - Unidentified body

329:

Elitech



Fig. 9.- Limonia

nubeculosa



Fig. 10 - Analysis of specimens with the trinocular magnifier



Fig. 7.- Tegenaria

doméstica

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CONCLUSIONS:

Rainfall in the region has a very marked dry period during the summer months, with a more or less even distribution throughout the rest of the year. The caves provide a very special habitat, with constant environmental conditions of humidity and temperature that allow the development of a unique flora and fauna.

By measuring the temperature in the cave and comparing it with other years, we determine fallen slightly. temperature has the that can By observing the temperatures of the caves and basements at the institute, similar results have been obtained, so we can deduce that they have similar

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