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A Speleometerological Database for Speleotherapy in Austria

Speleotherapy is a common tool for the treatment of several diseases like different kinds of Bronchitis and Rheumatism. Despite the fact that this method is widely used in most Eastern European countries as well as in Germany only a few locations exist in Austria so far (Badgastein, Oberzeiring, Bad Bleiberg). All of them are situated in abandoned mines or tunnels.

On the other hand some 13 000 caves are documented in the Austrian cave register currently. No natural cave is utilized permanently as a station for speleotherapy but a few are visited by patients on a rather non-regular base under supervision of a local physician.

So far there is no information-system available where interested physicians or speleologists could gather data about basic cave climate parameters of a certain cave. A database - called SPELMED - is now in preparation, compiling different data collections of previous databases (for cave temperatures, radon content, hydrochemistry and others) and combined with a GIS (e.g. *Mapinfo*) to enable a quick overview of areas of special interest.

The first step is a database rather of single measurements but with links to time-series stored in other software systems related to the data-loggers. Most significant parameters are temperature, air movement, absolute and relative humidity, carbon dioxide, Radon, gamma radiation, microbiology (bacteria & fungi in cave air) as well as aerosol data (chemistry). Other relevant information about the cave is included too. Some 700 datasets of single measurements and several hundred files of time series have been compiled so far.

It is already obvious that a remarkable portion of the Austrian caves would be suitable at least for small scale “speleotherapeutic points” and some of them could be upgraded to larger “speleotherapeutic stations” with no significant interference with the environment.

Unfortunately the public interest in Austria for this extremely cheap and natural treatment - having nothing to do with esoteric irrationalism - is rather poor. A reason for that might be the low financial profile of this method. It could be established easily yielding synergetic effects e.g. for show caves and communities and could be focussed on relatively widespread asthmatic diseases especially of children being treated in medium temperated caves.