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ABSTRACT

External air temperature (EAT) and the interior temperature of the talus (IT) were measured for one year at two low elevation scree slopes in the Sudeten Mountains, central Europe. Similar measurements were made at an 'ice-cave' beneath a talus and supplemented by cavefloor temperature (CGT). The year-round interplay between EAT, IT, and CGT can be subdivided into four periods: (1) winter cooling linked with ascending exhalations and downslope cool airflows; (2) spring warming linked with ice formation from meltwater refreezing between the blocks; (3) summer linked to a prolonged zero-curtain period; (4) autumnal increases of IT at the same time as EAT decreases. The differences between EAT and IT cause continual air circulation between the scree voids. Patchy permafrost probably occurs at these scree locations in spite of mean annual air temperatures of 6.8-7.5°C.