

## Observation of stalagmite laminae for paleoclimate reconstruction at Taga Mine Cave, Shiga Prefecture, Japan

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A lot of studies on paleoclimate reconstruction using stalagmites have been done all over the world. However, there are only a few stalagmite paleoclimate researches in Japan. In this study, we observe laminae of stalagmites collected at Taga Mine Cave, Shiga Prefecture, Japan (TAGA3, TAGA5, TAGA7, TAGA11, TAGA12) for paleoclimate reconstruction.

Stalagmite paleoclimate reconstruction has a potential to get high-resolution (annual~decadal) age proxy data, if stalagmite samples have annual laminae. However, some stalagmites have a few types of laminae within a sample (Baker et.al,2008). In this case, it is important to elucidate which types of laminae is annual.

When we observe the thin section of our samples by microscope, all samples show laminae. These laminae consist of natural organic matters because of fluorescent by UV excitation (Baker et.al,2008). Laminae interval is variable from several  $\mu\text{m}$  to a few hundred  $\mu\text{m}$ . Laminae of our samples are similar to the one from China and Turkey (Tan et.al,2006 , Baker et.al,2008).

Especially, sample TAGA3 has more obvious laminae than the other samples, but has the laminae which looks like sub-annual or supra-annual laminae reported in China (Tan et.al,2006). In addition, laminae are wavy in some parts of TAGA3. If we can distinguish annual laminae by U-Th age and find the feature of annual laminae, we will get high-resolution paleoclimate proxy data.

Keywords: stalagmite, laminae, paleoclimate