

## **A COMPARISON OF QUATERNARY (SW SWEDEN) AND PRECAMBRIAN (CALIFORNIA) GLACIOMARINE RHYTHMITES**

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Precambrian glaciation is recorded at several localities along the western North American cratonic boundary. A well-exposed section of the Kingston Peak Formation, Death Valley, contains very distinctive rhythmites, usually a few centimeters in thickness. A varve origin is possible since within the same section there are dropstones and diamicton beds consistent with a glaciomarine setting. On the other hand, the Kingston Peak depositional environment is also characterized as an aulacogen related to a western spreading and subduction zone, making tectonic influences are also probable. A comparison of the Kingston Peak rhythmites with the Quaternary, glaciomarine varves in SW Sweden illustrates both similarities and differences that are used to discuss their possible origin. A statistical evaluation of internal variations (lamina facies) within the rhythmites is done using Markov chain analysis. Also considered are the problems of interpreting yearly varves as opposed to rhythmites of other origins, such as turbidite flows or storm-event turbulence.