

## Unsolving the fault activity off Tokai through $^{14}\text{C}$ dating fossilised *Calyptogena* spp shells.

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The Nankai and the Tokai Trough regions are common areas for cold seeps, an area of the ocean floor where Hydrogen Sulphide ( $\text{H}_2\text{S}$ ), Methane ( $\text{CH}_4$ ) and often hydro-carbon rich fluid seepage occurs. These various substances encourage the growth of *Calyptogena* spp colonies to flourish at these sites. Naturally, cold seeps occur at tectonically active continental margins and are mostly ephemeral. This suggests that the activities of cold seeps are possibly influenced by the tectonic activity of the diverging plates. Previously attempts were made to reconstruct the cold seep activity history through amino acid racemisation dating. Yet further data is required to show any significant relationship. In order to further study the possible relationship between the cold seep activity and past major fault activity, radioactive  $^{14}\text{C}$  dating method will be used to attempt and accurately measure the age of the *Calyptogena* spp shells.

Keywords: Tokai Trough, Cold Seeps, *Calyptogena* spp,  $^{14}\text{C}$  dating, Fault activity