

## Mid-oceanic ridge is not the birth place of life: secondary place to live

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The image of Mother ocean or idea that the birth place of life is ocean is totally wrong. The primordial ocean immediate after the formation of the Earth was extremely toxic and should not be the place to live for any kind of life. Chemical composition of primordial ocean deduced from the Earth formation theory is too acidic (pH less than 1), extremely high salinity (5-10SU (SU is salinity unit, 1SU is present seawater salinity) and enriched in heavy metals. Therefore the birth place of life should have been on primordial continent which can have clean water like lacustrine environment. Probably the first life was born at natural nuclear reactor combined with geyser (natural nuclear geyser). Numerous kinds of commonote must have appeared in such environment, however they experienced mass extinction because of influx of toxic ocean. Lives that could endure strong outer force and repeated influx of mass extinction could survive to be the ancestor of animal and plant which is archaea and eubacteria respectively. Through time, cleansing of toxic ocean progressed by water-rock reaction between rock materials provided from continent and toxic ocean and fixation of heavy metals as ore deposit at the mid-oceanic ridge. As a result, acidic ocean is neutralized gradually. Salinity of ocean is thought to be dropped to 2SU by 635Ma. In other words, it was too difficult for life to live in ocean before that time at least. However, mid-oceanic ridge is exceptional place to reduce salinity. At immediate vicinity along mid-oceanic ridge, salinity is low, because seawater is separated into high saline dense seawater and lighter water closed to freshwater due to boiling. Lighter low saline water goes up and dense water move to deeper place. Due to this process, salinity around mid-oceanic ridge is kept lower, and it became possible for life to live there. However, as explained above, mid-oceanic ridge area is not the birth place of life. In addition to chemical composition of ocean, environment of mid-oceanic ridge is poor in diversity. Therefore it is not suitable for life to be emerged. As a result, birth place of life is thought to be on primordial continent with diversified surface environment and habitable trinity. In other word, lives born on the primordial continent had secondarily migrated to mid-oceanic ridge. The reason why lives around mid-oceanic ridge remaining characteristics of ancient life is migration into mid-oceanic ridge occurred in very early stage of life history.

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