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## Perturbation of eukaryotic life and ocean redox around the Precambrian-Cambrian boundary

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We analyzed the organic geochemistry from shallow-sea sections of upper Ediacaran and lower Cambrian strata including the Precambrian-Cambrian boundary in Kunming area, South China. The results showed a correlation between organic geochemical redox indicators (Pristane/Phytane ratio) and eukaryotic biomass indicator (sterane, sterane/hopane ratio). We report here these new findings on redox changes and eukaryotic biomass changes during the late Ediacaran to the early Cambrian. Sterane concentration and sterane/hopane ratio indicates that eukaryotic biomass increases throughout the interval from the top-Ediacaran to the lower Cambrian marked by Chengjiang Fauna. Pristane/Phytane ratio also coincidentally increases throughout the interval. These correlations suggest the anoxia at the end of the Ediacaran may be related to the extinction of Ediacaran Fauna, resulting the evolution of eukaryotic life in early Cambrian by an increase in dissolved oxygen.

Keywords: precambrian-cambrian boundary, ocean redox, eukaryotic life, biomarker, south china