families such as the Bothrophyllidae, Lithostrotionidae, Cyathopsidae, and Petalaxidae. Families uniquely typical of the Permian, characterized by Waagenophyllidae and Kepingophyllidae, dominate post-Sakmarian strata. This faunal change may be related to a major, worldwide regression, recognized at the end of the Sakmarian. Extinction of rugose corals at the end of the Permian occurred in two phases in South China. The first phase occurred at the end of the Capitanian and eliminated 47% of the families and 45% of the genera. Extrusion of the Omeishan Basalt, which is widely distributed in the western part of South China, and/or a global regression at the end of the Guadalupian could be the principal causes of this first phase of mass extinction. The second phase, which occurred at the end of the Changhsingian and is the largest extinction event in Earth's history, eliminated all remaining rugose corals.

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GUANLING BIOTA AND ITS LIFE ENVIRONMENT AND EVOLUTION

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Guanling Biota from bottom of the Upper Triassic Xiaowa Formation in Xinpu town, Guanling county, Guizhou province, China, has a fossil group which consists of marine reptiles (ichthyosaurus, thalattosaurus, sauropterygia and placodus), crinod, ammonite, bivalve, brachiopoda, conodont, fish and plants. It was noticed that lots of marine reptiles and crinoid, have intact features and delicate preservation. Sauropterygia, Ichthyostegadia and Placodontia are mainly three marine reptiles. Marine reptiles of Guanling Biota are similar to that in other areas of the Tethys domain. Sauropteryga and Ichthyostegalia possess transition characteristics, from Triassic to Jurassic to Cretaceous. Crinoids are more widespread and have the most intact appearance in the Guanling Biota. Genus of crinoid in the Guanling Biota is very simple, there is only one genus_*Traumatcrinus*. Two important criteria resulted from the study of lithofacies and paleontology of the study area, namely; the Guanling biota lived in a bay 10 km in width, whereas stream competency is weak, relatively poor in Oxygen. Guanling Biota evolution have several stages: Carbonate platform, steady environment, a little large distance from seastrand, deposition of upper part of the Zhuganpo Formation; lithic change between the Zhuganpo Formation and the Xiaowa Formation had been formed by one time massive recession; bay, frequently change between little distance from seastrand and far from seastrand, deposited alternating beds of limestone and detrital material of terrigenous origin limestone in bottom of the Xiaowa Formation; relatively stead bay at little distance from seastrand, life environment of Guangling Biota; Strong wavy sea environment, deposited middle-massive beds of limestone, there are lot of involution layers and slip beddings; Guanling Biota run way for the disaster(Strong wavy), migrated another place for life and ended life in the Guanling area.

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PALEOCENE-EOCENE TRANSITION BENTHIC FORAMINIFERAL ASSEMBLAGES IN THE SOUTHERN TETHYS DEEP SEA (E.G. AT KHARROUBA SECTION: NORTHERN TUNISIA)

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The microfauna analysis of the Paleocene-Eocene transition deposits at the Kharrouba section, reveals globally a high specific richness in benthic Foraminifera. At this section, located in southern margin of the Tethyan realm, the successive assemblages contain many species of deep see fauna. Among them *Rzehakina epigona, Tappanina selmensis, Gaudryina pyramidata, Nuttalides truempyi* are assumed to be restricted to deep sea environments and characterised Velasco fauna. They indicate especially lower bathyal environment which prevailed during the Paleocene-Eocene transition. In these assemblages, the shallow marine species of the Midway epifauna frequencies, assigned to *Angulogavelinella avnimelechi, Gavelinella danica, Cibicidoides alleni,* and so and so, testify warm seawaters close to the sea floor rather than shallower conditions. Especially the *Aragonia aragonensis* significant frequencies indicate appropriate warm sea floor conditions. They testify also that the Paleocene-Eocene transition global warming was confirmed at the Paleocene-Eonene boundary. This global warming event, coinciding with high dissolution short interval, had recorded a clear benthic Foraminifera destabilization into the deep sea.

LES ASSEMBLAGES DE FORAMINIFERES BENTHIQUES DU PASSAGE PALEOCENE-EOCENE DANS LES MERS PROFONDES DE LA MARGE SUD TETHYSIENNE (EX. COUPE DU JEBEL KHARROUBA, TUNISIE SEPTENTRIONALE)

L'analyse de la microfaune du passage Paléocène-Eocène de la coupe du Jebel Kharrouba nous renseigne sur le fait que des foraminifères benthiques sont à la fois abondants et hautement diversifiés à l'échelle spécifique. Dans cette coupe située dans la marge sud de la Téthys, les assemblages de foraminifères benthiques comportent de nombreuses espèces de mer profonde. Parmi ces espèces *Rzehakina epigona, Tappanina selmensis, Gaudryina pyramidata, Nuttalides truempyi* sont restreintes aux étages bathyaux et abyssaux caractérisant la faune Velasco. Dans ces mêmes assemblages la présence des espèces de la faune Midway déterminant les environnements des étages littoraux telles que *Angulogavelinella avnimelechi, Gavelinella danica, Cibicidoides alleni,* témoigne, dans ce cas, plutôt du réchauffement des eaux au niveau du fond des environnements bathyaux. En outre, les fréquences significatives de l'espèce endobenthique *Aragonia aragonensis* témoignent de la persistance de ces eaux chaudes au niveau de l'interface eau-sédiment pendant la limite Paléocène-Eonène et à l'Eocène inférieur. Ce réchauffement climatique global, coïncidant avec un bref intervalle de dissolution, est synchrone d'une déstabilisation des associations de foraminifères benthiques des environnements profonds.