Gehäuse pro Gramm Sediment (Plankton) und 0,5 bis 32 Gehäuse pro Gramm Sediment (Benthos) in den Proben finden. Der TOC erreicht maximal 0,9 %, sodass von durchgehend oligotrophen Nährstoffbedingungen ausgegangen werden kann. Der Anteil agglutinierender Foraminiferen nimmt von 38% an der Basis mit ansteigender Wassertiefe auf 0,3% ab und schwankt danach um. 5%. Der Anteil epifaunaler Arten schwankt zwischen 8 und 81%, während des IETM liegt er bei 3%. Mit Ausnahme des IETM kann insgesamt von gut belüfteten Bodenwasserbedingungen ausgegangen werden. Die häufigsten benthischen Arten sind *Bulimina paleocenica, Bulimina asperoaculeata, Gavelinella pachysuturalis, Haplophragmoides walteri, Lenticulina olokuni* und *Nonionina panamensis*. Bei den planktischen Arten dominieren *Acarinina nitida, Globanomalina chapmani, Igorina tadjikistanensis, Morozovella acuta, Morozovella aequa* und *Subbotina triangularis*. Während bei den planktischen Foraminiferen keine bedeutenden Veränderungen innerhalb der auftretenden Gattungen stattfanden, verschob sich mit der zunehmenden Bodenwassererwärmung das Spektrum der benthischen Gattungen von *Lenticulina* und *Gyroidinoides* zu *Gavelinella* und *Nonionina*. Während des IETM dominieren *Bulimina* und *Nonionina*, die den zunehmenden Sauerstoffmangel anzeigen.

MONOTYPISCHE RUDISTENASSOZIATIONEN: *CORALLIOCHAMA ORCUTTI* WHITE ASSEMBLAGES OF PUNTA BANDA REEVALUATED (NORTHERN BAJA CALIFORNIA, MEXICO)

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Cretaceous sediments in Northern Baja California form part of a superbly exposed convergent margin basin complex. The Late Cretaceous Rosario Formation forms part of this complex and was deposited in a highly mobile forearc strike-slip basin (BUSBY, 2004). Lithologies range from coarse alluvial fan deposits to upper shoreface, lower shoreface and offshore siliciclastics. South of Ensenada several outcrops along the coastline of Punta Banda face the Todos Santos Bay and expose spectacular *C. orcutti* assemblages.

Eight sections were measured in order to evaluate the *C. orcutti* beds based on sedimentological features and textural preservation. Three types of palaeoenvironmental settings related to palaeobathymetric position have been distinguished (Figure 1):

1) Allochthonous shell accumulations: These assemblages consist of chaotic arranged and broken *C. orcutti*, at some places scattered in well sorted monotonous sands. They are interpreted to represent foreshore rudist associations which have been reworked and transported offshore during storms events.

2) Autochthonous “tumble” associations: These assemblages consist of shells with irregular orientation along with individuals or clusters that are still in life position. Thin storm beds that show reworking of *C. orcutti* shells are intercalated. Both wave action and instable balance points of top-heavy individuals caused *in vivo* tumbling during growth. These associations are interpreted to represent upper to lower shoreface rudist associations which faced wave action.

3) Autochthonous elevator associations: These assemblages mainly consist of *in situ* elevator morphotypes of *C. orcutti* in a silt to clay matrix. They characterize deeper and quiet water zones of the lower shoreface to transition zone.

Shell shapes of *C. orcutti* cluster around three morphologically very variable (MARINCOVICH, 1975; ARANDA-MANTECA, 1991) morphotypes which are interpreted to represent adaptions to an elevator, clinger or recumbent mode of life (Figure 1).

The recumbent morphotype of *C. orcutti* is characterized by a free valve with smooth umbo, which fits into a notch worn into the dorsal margin of the right valve. In consequence, there is only little dorsal overhang of the umbo. This morphotype rest on the floor with its dorsal plane.

The clinger morphotype of *C. orcutti* is characterized by a strong umbo with asymmetrical curvature towards the anterior face. The umbo forms a prominent overhang at the dorsal side. The attached valve is often short and curved.

The elevator morphotype of *C. orcutti* is characterized by a strong, curved umbo of the free valve and an elongated, slender attached valve.

Although many of the above mentioned morphotypes are in paraautochthonous position, the evaluation of attachment scars allows reconstuction of the original (*in vivo*) orientation.

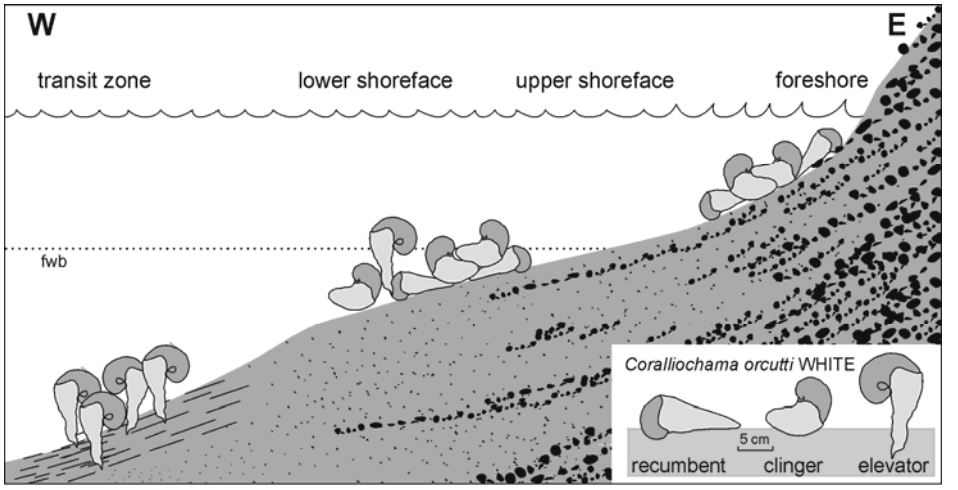

Figure 1: Schematical sketch (not to scale) of the palaeoenvironmental settings of *C. orcutti* associations in Punta Banda. Inserted box:, The morphotypes of *Coralliochama orcutti* WHITE shown in life position. View onto anterior face. Dark grey: free valve, light grey: attached valve.

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STRATIGRAPHISCHE UNTERSUCHUNGEN IN DER BODENHEIM- UND STADECKEN-FORMATION DER ZIEGELEIGRUBE JUNGK/WÖLLSTEIN (MAINZER BECKEN, RUPELIUM)

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In der seit über 125 Jahren betriebenen Ziegeleigrube Jungk in Wöllstein wurde ein 29m langes Profil aus der Bodenheim- und Stadecken-Formation (Oligozän, Rupelium,