generally hostile for petroleum and salt formation
except in extension of continental conditions
f. i. Challenger Knoll, 3572 m. oil, gas, Gulf of Mexico

2.4. theoretical framework

central oceanic ridges — mid ocean belts
high temperature convection
earthquake zone on axis
tensional features
thin earth crust
lower density mantle material, peridotite → serpentinite
zones of magnetic orientation parallel to axis
outward spreading 1—10 cm./year

E. L. Gealy 1971/p. 5
"data gathered by the Joides Deep Sea Drilling Project strongly support the theory of crustal accretion along mid-ocean ridges and of lateral spreading of the seafloor away from the ridges. Sediments immediately above basalt basement are younger over the crest of the mid-ocean ridges and, with minor exceptions, are progressively older away from the ridges crests in both the Atlantic and Pacific Oceans."

References

E. L. Gealy: Results of the Joides Deep Sea Drilling Project 1968/71. World Petr. Congrs Moscow 1971, Spec. Paper No. 1.
F. J. Vine (1971): Sea Floor Spreading Understanding the Earth, p. 233, The Artemis Press, Sussex.

Doz. Dr. H. K. Mostler, University Innsbruck

Conodonts of the Triassic

Triassic conodonts were neglected for a long time mainly because the general opinion was that they could not be used for stratigraphic purposes. In 1958 R. Huckriede issued a monograph on the conodonts of the Triassic, discussing at the same time their stratigraphic value by means of a table of distribution and also pointing to their comparatively lesser value for stratigraphy. As a result the interest in Triassic conodonts slackened down.

Intensified research on Triassic sediments, however, beginning some 5 years ago, showed that an exact study of conodont faunes could well be used for a stratigraphic subdivision of the Triassic.

The Lower Triassic (Skythian) to start with, can be subdivided into 3—4 "zones" (Staesche, 1964). W. C. Sweet's attempted subdivision into 9 zones derived from the study of the Salt Range sediments cannot be supported by the author's own investigations (samples from the Himalaya). A subdivision of the Skythian into 4 zones remains acceptable.

The Lower Middle Triassic (Anisian) can be divided into 2 (MOSHER, 1970) and sometimes into 3 or 4 zones (BENDER, 1967); the Lower Anisian (Hydasp) and Higher Anisian (Illyr), however, can very well be subdivided. An exact delimitation of the Skythian — Anisian was not yet possible; this problem is at present being investigated by the author.

The delimitation of the Upper Anisian-Ladinian by conodonts imposes considerable difficulties. According to MOSHER, 1970, the boundary is defined by the extinction of *Neogondolella constricta* (CLARK). HIRSCH made the attempt to define the boundary quantitatively by means of faunal assemblages; though a clear delimitation of the Anisian-Ladinian is not possible at present. A subdivision of the Ladinian is not yet well founded; it seems, however, that a distinction of 2 zones may be possible.

The delimitation Ladinian-Karnian is clearly defined by the extinction of *Epigondolella mungoensis* (DIEBEL), Karnian itself can be subdivided into 3 zones.

The Norian can be divided into 3 zones (KRYSTYN, 1970). The subdivision is partly based on the appearance of simplified "platform-types" and partly on the appearance of new forms shortly before the complete extinction of the conodonts.

Conodonts die out with the end of the Norian; reports concerning the appearance of conodonts in the Rhaetian (MOSHER, 1970), in the Jurassic (NOHDA & SETOGUCHI, 1967) and in the Cretaceous (DIEBEL, 1956) are either the result of a misinterpretation of stratigraphy or the conodonts were redeposited into these particular series.

Note: A preliminary distribution chart of triassic conodonts was handed out during the lecture.

Dr. R. OBERHAUSER, Geol. Survey of Austria

Excursion to the Dobratsch-Range, West of Villach, Carinthia with comments on general alpine tectonics

The Dobratsch-Range belongs to that part of the Southern Calcareous Alps, which is situated just north of the important Alpine-Dinaric fault separating Alps and Dinarids. The Dobratsch still exhibits the facies of the Northern Calcareous Alps in spite of its tectonic position in the south. The peak of Dobratsch consists of limestones of the Middle-to Upper Triassic transitional beds, rich in corals, calcareous sponges such as *sphinctozoae, hydrozoae,* calcareous algae and abundant problematic organic remains. Megafossils are rare, only gastropods, especially *Chemnitzia rosthorni* HOERNES, are more common. Some finds of cephalopods, namely nautilids, and lamellibranchs (especially pectinids) have been recorded. Foraminifera are very rare, and they are not diagnostic for age determination. The top of the Dobratsch mountain is the type-locality