nal shape of cusp are less important taxonomically, at least for these cordylodans, than shape of basal cavity and, probably, style of bar denticulation.

A Conodont Sequence over the Lower/Middle Devonian Boundary in the SW Lahn-Mulde/Eastern Rhenish Slate mountains.

By H. REQUADT and K. WEDDIGE

Geologisches Landesamt Rheinland-Pfalz, Emmeransstraße 36, D-6500 Mainz; Institut für Paläontologie und Historische Geologie, Richard-Wagner-Straße 10, D-8000 München 2.

Crinoidal limestones 11.5 m thick have been investigated in 57 samples. The neritic or high bathyal fauna contains abundant *Icriodus* specimens and only sporadic *Polygnathus* index forms. However, the *Icriodus corniger* lineage and the particular variants of *Polygnathus linguiformis* indicate a stratigraphic range from *serotinus* to *partitus*-Zone. Within the latter zone five faunal levels can be recognized, comparable with levels in the Ardennian-Eifelian facies area. In deviation from the Eifelian standard sequence forms of *Icriodus corniger* cf. *retrodepressus* without the characteristic depression occur. Moreover, *Latericriodus beckmanni sinuatus,* a conodont of the Upper Emsian of the Barrandian, is also found. Although the conodont-bearing limestones overlie an Upper Emsian hiatus, there are no obvious signs that the *Latericriodus* specimens are derived. It is therefore presumed that ecological factors are responsible.

Utility of Conodonts in Determining Rates of Synorogenic Sedimentation and in Timing Antler Orogenic Events, Western United States.

By CH. A. SANDBERG

U. S. Geological Survey, Box 25 046, Federal Center, Denver, Colorado 80 225, USA.

The extremely fine conodont zonations that have been developed for parts of the Paleozoic during the past decade provide a new and important tool for conodont biostratigraphers as well as for petroleum and structural geologists. This tool can be utilized to interpret the reservoir rocks, source rocks, and events of the Antler orogeny, which spans the Devonian-Carboniferous boundary in Nevada and Utah.

The 27 standard conodont zones of the Late Devonian permit its division into zonal time units, each having a span of about 0.5 m.y. Timespans of standard conodont zones of the Early Carboniferous are similarly calculated to be of about 1.5 m. y. duration. Using these timespans, rates of synorogenic sedimentation are calculated in m/m.y. as follows: Antler calcareous flysch, 267–400; Antler (Pilot) silty protoflysch, 32–160; bioclastic carbonate-platform sediments, 40–240; nonphosphatic basinal muds, 55; slope lime muds, 26–30; phosphatic starved-basin sediments, 4.5–9; and transgressive lag deposits, 1–3.

Applying the so-called Haug Effect, which states that times of major transgression are times of major orogeny, to the regional distribution and type of sediments and to conodont biofacies, a sequence of 11 important Antler orogenic, epeirogenic, eustatic, and erosional events can be interpreted for a time interval of from 16 m. y. before to 9 m. y. after the Devonian-Carboniferous boundary. These events and their duration are internally consistent regardless of any fluctuation in the radiometric placement of the boundary. The most significant structural interpretation is that emplacement of the Roberts Mountains thrust took 8 m. y., as determined by the age of the youngest allochthonous Devonian rocks and the oldest overlapping Mississippian rocks.

Silurian Conodonts from Southeast Alaska.

By N. SAVAGE

Department of Geology, University of Oregon, Eugene, Oregon 97 403, USA.

The Triassic Conodonts from the Inner Dinarides of Yugoslavia.

By M. SUDAR

Institute of Regional Geology and Paleontology, Faculty of Mining and Geology, University of Belgrad,