

Lehnert, Oliver (Charles University, Prague, Czech Republic) and John D. Cooper (California State University, Fullerton)

## **THE LATE CAMBRIAN-EARLY ORDOVICIAN RIMMED SHELF MARGIN OF EASTERN CALIFORNIA**

Various lithologic units have been described in the lower Paleozoic platform successions of the southern Great Basin and in coeval strata of the shelf-margin to basin environments in the southern Inyo Mountains (SIM), CA. However, data have been collected independently from these areas and no common sequence-stratigraphic framework has been established. The Talc City Hills, CA is a critical area for bridging both inboard and outboard stratigraphic schemes, and provides a testing ground for tracing several of the sequence boundaries established by Cooper and Keller (1995, 2001) in the platform interior into these more outboard sections.

In the SIM, the lower part of the Upper Cambrian Lead Gulch Fm represents low-stand deposition along the continental margin. During subsequent transgression and deposition of the Dunderberg Shale on the platform, the thin-bedded calciturbidites of the upper Lead Gulch Fm. were deposited. At the shelf margin (Cottonwood Mtns, Death Valley), impressive karst surfaces occur within and at the top of the Late Cambrian upper Nopah Fm. This, together with more microbial facies than in the inner platform sections to the east (e.g. Nopah Range), suggests a paleohigh along the shelf rim.

During the early Ordovician, the typical upper Nopah facies prograded westwards to the Talc City Hills area and beyond, where the shallowest facies, dominated by tidal flat grainstones, is observed in the upper Tamarack Canyon Dolomite at Mazourka Canyon and Badger Flat in the SIM. The margin of the rimmed shelf was approximately in this outboard region until the upper Tamarack was covered by the silty/shaly Al Rose Fm and its platform equivalent, the Ninemile Shale during the Ibexian. These patterns reflect a major facies shift towards the basin and a progradation of the rimmed shelf environments to the NW from the latest Cambrian through the Early Ordovician.