



Macroforaminiferal Biostratigraphy of the Salt Mountain Limestone (Paleocene; Thanetian) of Alabama: Correlation with Sections in Cuba and Jamaica

Belkasim Khameiss^{1,2} and Richard Fluegeman¹

¹Department of Geological Sciences, Ball State University, Muncie, Indiana

²Department of Earth Sciences, University of Benghazi, Benghazi, Libya

ABSTRACT

The Paleocene Salt Mountain Limestone of Alabama is of interest because it contains a fauna of macroforaminifera as well as typical smaller benthic foraminifera of the Midway-type fauna. The Salt Mountain Limestone is an anomalous unit in the Paleocene section of the eastern Gulf Coastal Plain representing a reefal limestone in a section dominated by siliciclastics. It has long been correlated with the *Ostrea thirsae* beds of the Nanafalia Formation but both planktonic foraminiferal and calcareous nanofossil biostratigraphy suggest it is older. Accordingly, the Salt Mountain Limestone has been interpreted as a reef associated with the low stand systems tract of Cycle TA 2.1 in the eastern Gulf Coastal Plain.

Macroforaminifera in the Salt Mountain include *Orbitoclypeus weaveri*, *Athecocyclina stephensoni*, and *Ranikothalia catenula*. This assemblage includes elements of the *Ranikothalia catenula* fauna of the Caribbean, Mexico, and northern South America. The occurrence of *Ranikothalia catenula* marks the first report of this taxon from the Salt Mountain Limestone and provides an important biostratigraphic link to the well-known macroforaminiferal faunas of the Caribbean region.

The *Ranikothalia catenula* fauna in Cuba and Jamaica is essentially an assemblage zone used for biostratigraphic correlation. In western Cuba, this assemblage biozone ranges from planktonic foraminiferal biozone P4 through biozone P5 (Thanetian). In eastern Jamaica, the *Ranikothalia catenula* fauna has been documented from rocks as old as planktonic foraminiferal biozone P3b (Selandian) but its upper stratigraphic range has not been constrained. The Salt Mountain Limestone has been assigned to planktonic foraminiferal biozone P4b thus the *Ranikothalia catenula* fauna from that locality is within the range of the assemblage zone in the western Caribbean. Further work on *Ranikothalia catenula* fauna from the Salt

Mountain Limestone may facilitate the biostratigraphic utility of macroforaminifera in the Gulf and Caribbean regions.