

Integration of Paleontology Key to Building Impact

Farley, Martin B.¹ (1) University of North Carolina at Pembroke, Pembroke, NC.

Paleontology builds on a broad base of knowledge and technology developed in industry and academia. The field has challenges that must be addressed in integrating aspects of the discipline and marketing our technologies to the broader community to continue to be effective. Industry has contributed to utility by synthesizing data from multiple fossil groups, emphasizing geologic context, pioneering new approaches from sequence stratigraphy to well biosteering, and analyzing numerous sections in high sedimentation rate basins. Academia has emphasized biological effects on fossils in space and time, built integrative databases, provided high quality sections from land and Ocean Drilling Program, and pioneered stable isotope and multivariate analyses. Academic work has built on the sequence stratigraphic base of industry by modeling effects of sequence architecture on fossil occurrence and estimating statistical uncertainty for biostratigraphy. Environmental micropaleontology, such as the late Holocene of the Gulf of Mexico “dead zone,” brings tools developed for deeper time to bear on shallow time to the benefit of larger society. Integration of all recoverable fossil groups with the larger context is the key to effective use of fossils. Industry has been better situated to integrate multiple groups, but data acquisition from consultants can allow fragmentation in industry to persist. Limits that must be addressed are narrow links between academia and industry, continued specialty and society fragmentation, such intense industry focus on today’s question that technology development is neglected, and the small faculty population at graduate universities to produce future micropaleontologists. From its outset in 1978, North American Micropaleontology Section (NAMS) has acted to bring the disparate parts of micropaleontology together. This includes sessions at AAPG and research conferences on geologic applications of microfossils. These have brought together specialists in multiple fossils, training in new tools like CHRONOS, and showcased the best integrated paleontologic-geologic case studies. We need to market paleontology more effectively to the larger scientific communities. I advocate “infiltration” by presenting paleontology’s utility in the meetings of these other communities. NAMS can aid this effort by forging better links with other paleontological societies and continue to provide a link for micropaleontologic and industry/academic endeavors.