

UNIVERSITY OF CALIFORNIA

DEPARTMENT OF PALEONTOLOGY  
BERKELEY 4, CALIFORNIA

March 4, 1963

Dr. H. B. Stenzel  
Shell Development Company  
Exploration and Production Research Division  
3737 Bellaire Boulevard  
Houston, Texas

Dear Dr. Stenzel,

Many thanks for your letter concerning the Turritellas and for the material of Turritella gilberti Bowles. I have been using your catalog of Type Invertebrate Fossils of North America for some time and have found it a great help, and am indeed happy to know that it is still available. I regret that it has not been possible for you to continue that very worthwhile project.

I am somewhat surprised by your statement that Turritella martinensis Dall is now known to be Oligocene. Does this mean that the Ocala limestone occurrences are spurious and that the Martin station beds are now considered Vicksburg in age? How about the Barnwell sand citations? Perhaps there is now a tendency to place the Oligocene - Eocene boundary lower in the Gulf Coast succession?

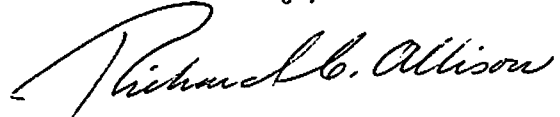
In a way, I feel sorry for myself studying Turritellas too! I have a great many specimens which I want to refer to Torcula; in fact it is my belief that Turritella rina Palmer is even an early member of the Torcula stock, though I favor raising Torcula to a genus and establishing some new subgenera for it. This would follow the lead of Marwick (Proc. Mal. Soc. London, vol. 32, pt. 4, 1957) in radically subdividing Turritella Lamarck. It seems to me that if nomenclature is to express phylogenetic relationships, as we understand them, then subdivision must follow. Our knowledge of these relationships has been more advanced than our nomenclature since the fine efforts of Katherine V. W. Palmer, Charles Merriam and Edgar Bowles.

Without doubt, the variation in a single population of many Turritellid species is perplexing, especially if one's sample is too small. We can observe this variation in a fossil population which we assume to belong to a single species, but the biggest drawback is the lack of knowledge of what controls and limits variation in the living animal, i.e. what is the relationship between form and function, if any, and what is the relationship between the genetic constitution of an animal and its morphology; if we want fossil species to conform to species based on genetic factors as geneticists and some neontologists use, then we need to understand the relationship of form and function and genetics in mollusks far better than we do. I certainly do not pretend to be able to bring this insight into my study of Turritellas, but I am

certainly mindful of it, and am trying to do my best to evaluate variation and phyletic considerations with my present knowledge; perhaps I am to be pitied, at any rate I indulge in a little self-pity over some of my material from time to time. If I help the situation at all, and don't provide too many names needing later subordination, I will be satisfied.

Thanks again for the loan of the T. gilberti specimens; I am returning them now. I wish all my material was as well preserved and as plentiful. If you have comments or criticisms of my viewpoint, I would be more than happy to have them, I hope my mind is still open to advice. Again, many thanks.

Sincerely,

A handwritten signature in cursive script that reads "Richard C. Allison". The signature is written in dark ink and is positioned below the typed name.

Richard C. Allison  
Dept. of Paleontology  
University of California  
Berkeley 4, California