

December 6, 1944

Dr. Charles E. Weaver  
Department of Geology  
University of Washington  
Seattle 5, Washington

Dear Dr. Weaver:

Dr. Turner is in the Navy and I shall let him know of the statement in your letter of November 24.

By separate mail (several packages) I am sending you several publications concerning the Tertiary of the Gulf Coast. Perhaps I should take occasion to point out new procedures contained in these publications. The paper "A New Zone in the Cook Mountain" uses bentonite beds for exact detailed correlation of the exposures over a distance of 30 miles. Without the aid of these bentonites it would never have been possible to prove the exact correlation of that zone and to trace it so far. In the other papers you will notice that I have endeavored to define each formation not only by the usual criteria, lithologic composition and faunal content, but also by a new criterium, the nature of its top and bottom boundaries. It is my impression that henceforth formations should be described on the basis of these three criteria and that these three criteria should be applied in each and every case. It has become apparent that the nature of a boundary, be it disconformable or conformable by transition or intertonging, is very characteristic for each formation and that there is a distinct individuality in that respect. The hunt for such boundaries has led to the discovery of a great many disconformities. Whereas most geologists working in the Gulf Coastal Plain have assumed that the Eocene section is essentially complete and does not contain any major breaks, it is now apparent that this is not the case but that there are numerous widespread regional disconformities which are of stratigraphic value. This procedure has led to considerable revision of the stratigraphy and a much neater definition of the units involved. In many instances I find that it more important to trace disconformities than lithologic units because disconformities will continue unchanged where facies changes will affect the over- or underlying lithologic units.

Please let me know if I can be of any help to you in your present work.

With best wishes,

Sincerely yours,

H. B. Stenzel, Geologist