

6 Rolla Gardens,
Rolla, Missouri,
June 30, 1957.

Dr. Henryk B. Stenzel,
3726 Colquitt,
Houston 6, Texas.

Dear Henryk:

I am most appreciative of your good letter of May 13, with the lucid answer to what I am afraid was a somewhat confused question about the Stone City stratigraphy.

From my memory of the locality, our collection was from the Wheelock. At least, I do not remember any prominent bench above the spot where the sample was taken. However, I certainly shall not publish until I have the chance to go back for a recheck -- and to locate the glauconitic bed in your detailed column. I had intended to make the expedition early this summer, but apparently the river is so high that the outcrop is covered. Possibly it may even be necessary to wait until next year. (But one hates to hold up a publication that is ready to submit!)

I do not quite understand your comment that "Campbell's Bibliography fails to list the one paper in which North American Eocene otoliths are described." (The italics are mine.) Both Campbell's Bibliography (SEPM) and J. Pal. article listed Koken's 1888 paper with a number of Claiborne and Jackson otoliths described. Koken wrote a paper included in a work by von Koenen on the Paleocene of Copenhagen that could have something on North America. I shall have to check that anyway. But I find no mention of any pre-1929 work on North American Eocene forms other than Koken's 1888 effort -- and I have compiled a fairly extensive bibliography from quite diverse sources. (If you should happen to run onto any further dope on the alleged missing reference, I should be most happy to have it.

We were very interested in reading that you had once worked some on otoliths. Fascinating things, no? I have assembled quite a fair collection of fresh water species from this general area (we do quite a lot of fishing!), and I have received some excellent comparative material (identified) from the Gulf Coast and from Japan. Since last fall, I have been extracting allathree sets of otoliths from all species available here. As you probably know, nearly all of the work done on them has been based solely on the sagitta. The lapillus, although much less common, is found fossil. (I do not entirely understand why the asteriscus is virtually unknown in microfossil occurrence -- although a few have been taken from fossil skulls.) At any rate, I am very much interested in the relationships of the complete sets.

I doubt very much that analogues of Recent fish were much smaller, if any, during the Eocene. Frost (possibly the best of the workers on fossil otoliths) was disturbed by the abundance of immature forms in the British Eocene. He supposed that their distribution was in faeces from larger fish (that must have gone elsewhere to die?) which fed mainly on immature fishes. -----Personally, I suspect that larger otoliths are subject to destruction either before, during, or after fossilization. There is a large amount of organic material in the otolith (in the form of a meshwork of fibers), and I suppose that the larger specimens have a much greater tendency to suffer erosion. (I believe you mentioned the occurrence of "rolled" otoliths in one of the beds at Stone City.) ---In the case of my own collection, the vast preponderance of small and of immature otoliths is due to my habit of collecting: taking bulk microfossil samples in the field and washing and sorting them in the lab. A representative collection would require quite a lot of work in the field, hunting for otoliths as one would for megafossils.

While I think of it, I may mention that I am mailing a copy of our "Monograph of fossil holothurian sclerites," as well as our general paper on fossil holothurians and a reprint of our "Annotated bibliography of holothurian paleoecology" (the last two papers under separate cover). We did not omit you intentionally!

I should be glad to get your otoliths, at any time that you happen to unpack your collection. It is likely that I shall be working on them for some time to come, so there is no hurry. (And we have quite a number of other things to be done.) Ordinarily, I do not collect mollusks in the field -- there is just too much work on microfossils, and I have neither the time nor inclination for curatorial work on mollusks. However, if (and when) we take our expedition into the Gulf Coast, I shall be glad to collect some for you. (We are very appreciative of your suggestion of the guidebooks, and shall so equip ourselves before making the trip.)

I hope to visit Houston and vicinity whenever it becomes possible to rework the Stone City locality, and am looking forward to a visit with you.

Regards,


Don L. Frizzell