

April 18, 1937.

Dear Doctor Miller:

You have pleased me very much by sending me your manuscript, a courtesy which I greatly appreciate. Naturally I am very much pleased that somebody has read my paper on *aturias*.

Years ago I took special effort to look at some *Aturia aturi* topotypes in Europe. At that time I was so struck with the difference between *At. aturi* and the Texas Eocene nautiloids in my own collection, that I thought the Texas specimens should belong to a different genus altogether. Therefore, I listed these specimens as *Hercoglossa* n.sp. in *Univ. Tex. Bull.* 3101, p. 99. However, later study showed that they are not *hercoglossas*, and in my paper on these *aturias* I described them as *Aturia* (*Brasaturia*). I am led to assume from your manuscript that you have not had any *Aturia aturi* for study. It is my belief that you should try to obtain some topotypes or quasi-topotypes of *At. aturi*, so that you may have the same basis for your conclusions as I had. It is possible that you may then consider the differences sufficient to distinguish the subgenera. Presumably you might be able to obtain some topotypes from the British Museum.

About *Milaturia* I do not need to write you. You will be able to judge for yourself, as I am going to send you my specimens. Of course I shall appreciate it if you return them after you have studied the specimens.

The other point I would like to raise is rather philosophical than factual. You write that "we can recognize more or less of a phylogenetic series within the genus all of the observable differences are gradational". The fact that evolution from one genus into another is gradational is generally recognized among paleontologists. This fact does however not preclude the distinction of different genera in direct line of descent. Occasionally species may be discovered which are just about halfway between two genera. The finding of such species does not conflict with the validity of both genera. The same considerations pertain to subgenera provided they are in direct line of descent. You use "primitive *Hercoglossa*" and "advanced *Hercoglossa*". (I quite agree with this use). It might be just as convenient to use *Hercoglossa* (Subgenus A) and (subgenus B), and this might even be better, because primitive and advanced imply an interpretation on which others might not agree and subgeneric names imply nothing but recognizable differences. A similar statement may be made for the subgenera of *Aturia*.

I like very much your discussion of the evolution of *Aturia* from *Atureidea* and *Hercoglossa*. The text-figure is very well arranged and clear. Years ago T.A. Conrad mentioned in one of his numerous papers that he had found nautiloids at Vicksburg, Miss., (Oligocene). Possibly his material is at the Philadelphia Academy. Oligocene nautiloids are rare on the East coast. It might be very interesting to describe this material if it can be found.

Cordially yours