

MELLON INSTITUTE

4400 FIFTH AVENUE

PITTSBURGH 13, PA.

May 2, 1963

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

Dear Dr. Stenzel:

In reference to your letter of April 23, 1963, I'm afraid that we can be of little help to you. A few years ago we investigated the amino acid content of a number of recent aquatic sediments and ancient fine-grained rocks. The results of these studies have been published and reprints are attached.

From the results it was obvious to us and to other investigators in the field that the various amino acids disappeared at different rates. We were intrigued with the possibility that the ratios between amino acids might be used to estimate geologic age. To do so one would have had to make an assumption as to the initial distribution of the amino acids. For this reason we felt that shells of organisms of which similar types exist today would be best suited for study, hence our interest in Exogyra provided by Dr. Hanna.

In the initial stage of the work it was found that the rates of disappearance of amino acids were strongly influenced by their environment and particularly by polymerization as protein or polypeptide. It was our feeling that the resulting kinetics would be too complex to permit any but very rough estimates of age or geologic time interval, consequently, the study was inactivated.

Sincerely,


Senior Fellow

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