

SCHEFFER

August 12, 1965

AIR MAIL

Dr. Victor B. Scheffer
c/o Bureau of Commercial Fisheries
Marine Mammal Biological Laboratory
Sand Point Naval Air Station
Building 192
Seattle, Washington 98115

Dear Dr. Scheffer:

Thank you for your letter of July 21, 1965. The X-ray diffraction pattern which I published in "Science" was made by our own X-ray laboratory here at Shell Development Company.

For the X-ray machine we use the sample has to be ground to a powder and must be sufficient for about cubic centimeters of powder. That sets a limit to some investigations, if sufficient material is not available.

Shell Development Company does some X-ray work for outsiders as a public good-will feature. However, I believe you would want to work with the very best specialist in bone and tooth X-ray work. That person is Professor Duncan McConnell, College of Dentistry, Ohio State University, Columbus 10, Ohio. My good friend Duncan has been investigating phosphate minerals for about 30 years and has been connected with the College of Dentistry for that very reason. He is a trained mineralogist, not a biologist nor a dentist.

Also, I would expect that your local university has an X-ray apparatus for powder X-ray work and a skilled X-ray mineralogist in the Geology Department (perhaps it goes under the new name Earth Science department) or in the Ceramics Department (Clay mineralogy). It might be well to become acquainted there.

I am not so clear what the question is that you want answered. I suspect you might want a radiograph rather than a powder diffractogram. A radiograph might show the growth layers, without that one has to cut the tooth.

Sincerely yours,

H. B. Stenzel

HBS:jmf

Klug, H. P., and Alexander, L. E., 1954, X-ray diffraction procedures for polycrystalline and amorphous materials: New York, John Wiley and Sons, Inc., 716 p.

Clark, G. L., 1927, Applied X-rays: New York, McGraw-Hill Book Co., 251 p.

Peiser, H. S., and other editors, 1955, X-ray diffraction by polycrystalline materials: London, Inst. of Physics, 723 p.

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