## On the definition of fossil and subfossil by C. O. VAN REGTEREN ALTENA

I agree with Dr. Hubert (see the preceding pages) that good definitions of scientific terms are very important. Notwithstanding his objections I stick to my definition of subfossil, which I should now formulate as follows. "Remains of, or traces left by, Recent organisms which make the impression of being fossils by their state of preservation." It should, however, be accompanied by a good definition of fossil, which I agree that neither ZITTEL's nor that of "Geological Nomenclature" is. For me a satisfactory definition of fossil runs as follows.

"Remains of, or traces left by, organisms which lived before the Recent age began. These remains or traces should be recognizable as such by their form."

The second part of this definition is important, because it excludes, i.a., organic sediments like limestone or coal. Admittedly it is a draw-

back of the definition that the beginning of the "Recent age" can not objectively be settled. I should, however, not hesitate to call the shells which Dr. HUBERT found in his aquarium subfossils.

Attempts to base the definitions wholly or partially on state of preservation lead to absurdities, as appears from the definitions given in "Geological Nomenclature". The well preserved fossils from the Eocene lignitic deposits of the Geisel Valley for instance fit both the definitions of fossil and subfossil as given in that book.