

millimeters.¹⁶

At this point let us compare the upward growth rates we have cited, with the total depth of the thickest known coral reefs--the atolls in the Marshall Islands. During the drillings which were made into these islands, the thickest coral reef deposit found was that of Eniwetok atoll, where one drilling, as stated above, had to go through 4,610 feet of reef deposit before striking the volcanic rock (basalt) base. Another drilling nearby extended through reef deposit for 4,158 feet before reaching the volcanic base.¹⁷ It is of course true that no one is able to determine the exact length of time which was required for growing such an extensive reef, but it is obvious that it was a very long process. If we divide the thickness of the Eniwetok reef by Mayor's 8 mm. of deposit per year, we arrive at 176,000 years of continuous growth required for the laying down of this much thickness. However, this would be a false picture, because of the many factors which retard the build-up of the reef, as discussed above. Thus the total length of time required for forming the 4,610 foot reef deposit of Eniwetok was undoubtedly many times the 176,000 years.¹⁸

Natural Laws Which Limit the Metabolic Processes of Growth

In considering the length of time required for the growth of a coral reef of this thickness, some who are unfamiliar with the laws of nature may go astray. They may attempt to hypothesize that corals and other marine organisms could have grown many times faster in ancient times than they do now. Here is where we need a brief lesson on the subject of biological growth, and a reminder of what we pointed out in the previous chapter; namely, that God's natural laws--including biological laws--were stable, from the time of creation.

The reef-forming kinds of animals and plants are, and always have been, dependent upon the chemical (metabolic) processes which God established as their "way of life." There are numerous kinds of chemical processes within each living cell, whether it be in a snail clinging to a rock in the surf, a coral polyp quietly collecting its food, or a filament of algae doing its work of photosynthesis. Some of the chemical reactions within the cells are for extracting energy from food, and some for building the necessary organic molecules for cellular growth. Other reactions have to do with the collecting of mineral ions from the sea water and processing them for the production of an external skeleton or shell.

All of these metabolic activities are completely dependent upon the supply of raw materials (mainly oxygen, minerals, and food). The rate of growth of an organism is limited by the availability of these raw materials, and also by the rate at which chemical processes can be carried on in the cells of the animal or plant. The rate of metabolic activity is confined to definite limits for all organisms. For example, a farmer can induce more rapid growth in hogs and broilers by increasing the supply and quality of raw materials for these animals; but there are very definite limits to this increase--as