wise Archæan confines, even during Cambro-Silurian time, each having been an independent trough or basin. In the Acadian trough the subsidence carried down the bottom of the trough as deposition went forward, but not the Archæan ridges along the confines; for if these Archæan ridges had subsided also, they should have had, at the beginning, the extremely improbable height of 30,000 or 40,000 feet. The Acadian and the Gaspé-Worcester troughs were sinking, and receiving, in some parts, if not generally, formation after formation, to the close of the Carboniferous period; and the Connecticutvalley trough, to the middle or later part of the Devonian era; and this was not the last, as will be shown, of the rock-making carried on in the Acadian and Connecticut-valley troughs. The western part of the Continental Sea had also its areas of subsidence and deposition. Only subsiding troughs received thick deposits for the various formations.

2. Diversities in kinds and in thickness of rocks. - The vast Continental Interior, shut away from the more destructive forces of the ocean, afforded the most favorable conditions possible for the growth of aquatic life, and therefore for the making of limestones; and the life had no doubt the luxuriance prevailing in the existing coral reef seas of the tropics. What this degree of luxuriance is at the present time may be well learned from the admirable photographs of a volume by W. Saville Kent on The Great Barrier Reef of Australia. To see the reefs themselves is better; but this not being readily attainable, the geological student, who would appreciate the profusion of life, and something of the beauty of Paleozoic reefgrounds, should see the photographs. The colors are absent, but there is everything else in the pictures. The species represented are modern Corals of various kinds and forms; but it will be easy, afterward, to think of vast areas of Crinoids, ancient Corals, and other Paleozoic productions; for the result is the same in kind, if shell-making Mollusks were the chief kind of life. He would learn also the pertinent fact that limestone-making is not necessarily, or ordinarily, deep-water work.

The effects of the tidal and wind-made currents in forming fragmental accumulations within the Interior Sea, especially along its borders, have been variously illustrated in the preceding pages, with special reference to those of the northeast and east; and there has been brought out to view, also, the contrast with those of the limestone formations over its interior. This contrast was augmented through each of the successive periods by the contrast in the amount of subsidence in progress : - over the Interior Sea, but little, the formations only 3000 to 6000 feet thick; over the eastern portion, a great subsidence, 30,000 to 40,000 feet, because included within the area of the subsiding Appalachian trough. In the Continental Interior, the Paleozoic rocks are full two thirds limestones. The coal formation there has many limestone strata; the Subcarboniferous consists mostly of limestone; the Devonian and Upper Silurian strata are chiefly limestone; the Lower Silurian. even through the Hudson period, mostly limestone; and the Cambrian chiefly limestone. The intercalations of strata of sandstone and shale indicate