falls or rapids of the Ohio River at Louisville, in Kentucky, *where it much resembles a modern coral reef.* A wide extent of surface is exposed in a series of horizontal ledges, at all seasons when the water is not high; and the softer parts of the stone having decomposed and wasted away, the harder corals stand out in relief, their erect stems sending out branches precisely as when they were living. Among other species I observed large masses, not less than five feet in diameter of *Favosites Gothlandica*, with its beautiful honey-comb structure, well displayed, and by the side of it, the Favistella combining a similar honey-combed form with the star of the *Astræa*. There was also the cup-shaped *Cyathophyllum*, and the delicate net-work of the Fenestella, and that elegant and well known European species of fossil called the "chain coral," *Catenipora escharoides*, with a profusion of others.—These coralline forms were mingled with the joints, stems, and occasionally the heads of lily encrinites. Although hundreds of fine specimens have been detached from these rocks to enrich the museums of Europe and America; another crop is constantly working its way out under the action of the stream, and of the sun and rain in the warm season when the channel is laid dry."

This corniferous limestone, "the coral reef," of which Sir Charles speaks, leaves the State of New York near Buffalo, and crosses into Canada where it constitutes, as we have stated in our first article, * nearly all the stratified rock that can be seen in the counties of Norfolk, Oxford, Perth, Elgin, Middlesex, Kent, Essex, and portions of several other counties adjoining these. It cannot, of course, be seen everywhere upon the surface, being for the greater part concealed beneath the drift formation, or those deposits of clay, sand, and gravel, which constitute the loose soil of the country; and again in some places where it can be seen, it is not composed altogether of coral, while in other localities the corals being liberated by the decomposition of the rock literally cover the ground.

In order to convey an idea of the nature of these fossil corals, we think it proper to make in this place a few observations concerning the organization of the humble, but interesting, and often most beautiful little animals, which in modern seas form the reefs by their accumulated remains. In the world of life there is a vast difference between the lowest and the highest of animated creatures, but geology shews us that the former have in all ages affected more in transforming the surface of the earth than the latter. The physiological structure of the coral animal consists of little else than a digestive cavity or stomach and a mouth leading into it, yet this simple apparatus has the power of withdrawing from the ocean the various elements held in its waters, and of converting them into rock. Myriads of these creatures swarming together, cover the sides of submarine mountains with one unbroken sheet of life and by constantly absorbing from the water the component parts of coral rock, and converting it into stone, they cause the ground, as it were, to grow beneath them. Every year a fresh layer is added to every portion of the space occupied by them, and their subaqueous mountain grows higher and higher until it reaches the surface, and becomes a coral island.

* See page 22 of the first number.