

geological formations, yet it furnishes, according to Mr. Miller, more fossil fish than *every* other geological system in England, Scotland, and Wales, from the Coal Measures to the Chalk, inclusive. It is, in short, "*the land of fish*," and "could supply with ichthyolites, by the ton and by the ship-load, the museums of the world." Its various deposits, with the curious organisms which they inclose, have been upheaved from their original position against a granitic axis, about six miles long and one broad, "forming the great back-bone of the western district of the Island Pomona; and on this granitic axis, fast jambed in between a steep hill and the sea, stands the town of Stromness."

The mass or pile of strata thus uplifted is described by Mr. Miller as a three-barred pyramid resting on its granite base, exhibiting three broad tiers — red, black, and gray — sculptured with the hieroglyphics in which its history is recorded. The great conglomerate base on which it rests, covering from 10,000 to 15,000 square miles, from the depth of from 100 to 400 feet, consists of rough sand and water-worn pebbles; and above this have been deposited successive strata of mud, equal in height to the highest of our mountains, now containing the remains of millions and tens of millions of fish which had perished in some sudden and mysterious catastrophe.

In the examination of the different beds of the three-barred formation, our author discovered a well-marked bone, like a petrified large roofing nail, in a grayish-colored layer of hard flag, about 100 yards over the granite, and about 160 feet over the upper stratum of the conglomerate. This singular bone, which Mr. Miller has represented in a figure, was probably the oldest vertebrate organism yet discovered in Orkney. It was $5\frac{7}{8}$ inches long, $2\frac{1}{4}$ inches across the head, and 3-10ths of an inch thick in the stem, and formed a characteristic feature of the *Asterolepis*, as yet the most gigantic of the ganoid fishes, and probably one of the first of the Old Red Sandstone. In his former researches, our author had found that all of the many hundred ichthyolites which he had disinterred from the Lower Old Red Sandstone were comparatively of a small size, while those in the Upper Old Red were of great bulk; and hence he had naturally inferred, that vertebrate life had increased towards the close of the system — that, in short, it began with an age of dwarfs, and ended with an age of giants; but he had thus greatly erred, like the supporters of the development system, in founding positive conclusions on merely negative evidence; for here, at the very base of the system, where no dwarfs were to be found, he had discovered one of the most colossal of its giants.