

supposed these organisms had come into existence after the Deluge. To the epoch of the Deluge he also attributed gigantic disturbances of the earth's surface that had uplifted great portions of Scandinavia and thrown other areas into the interior of the earth. He thought that frequent recurrences of disturbance had taken place, elevating and destroying mountain-systems and continents.

Hiärne's work was written in his own language, and was little read outside Sweden. The scientific writings of Emanuel Swedenborg, the religious enthusiast, were more widely read. Swedenborg (1688-1772), who held for a long time the post of Assessor of Mines in Sweden, took a great interest in fossils, and in his *Observations of Natural Things* (1722) he mentions and describes a large number of Swedish fossils. He thought the fossils found in high tablelands and mountains had been left there by the flood; he regarded the trap-rocks (Swed. *trappa*, a stair, from the characteristic weathering) as aqueous sediments, and referred volcanic phenomena to the presence of molten reservoirs within the solid crust of the earth.

A work devoted to palæontological details was published in 1727 by Magnas von Bromell; his *Lithographia Suecana* treats of trilobites, corals, and gastropods from Gothland, and of graptolites and plant-remains in calcareous tuff. Another author, Kilian Stobæus, described the first known Ammonites and the so-called "Brattenburg pennies" from the Cretaceous deposits of Schonen. The year 1743 was signalled by the publication of the famous observations made by Anders Celsius on the sinking of the sea-level in the Gulf of Bothnia. Celsius reckoned the lowering of the sea-level at 450 ft. in 10,000 years.

Carl von Linné (1707-78) published in 1756 his account of a geological tour that he made as early as 1741 with six students to Oeland and Gothland. At West Gothland Linnæus had investigated very carefully the horizontal strata of the "transitional formations" (now identified as Silurian and Cambrian), succeeded by a series of trap-rocks well exposed at the Kinnekulle hill. A typical section through the Kinnekulle hill was drawn up by Johan Svensson Lidholm, under the guidance of Linnæus, and it was taken as a standard for the stratigraphical relations throughout Sweden. Linnæus assigned the trap or igneous series to aqueous origin. In