

It sometimes happens that scarcely a single bone, or scale, has been removed from the place it occupied during life; this condition could not possibly have been retained, had the uncovered bodies of these animals been left, even for a few hours, exposed to putrefaction, and to the attacks of fishes and other smaller animals at the bottom of the sea.*

Another celebrated deposit of fossil fishes is that of the cupriferous slate surrounding the Hartz. Many of the fishes of this slate at Mansfeldt, Eiseleben, &c. have a distorted attitude, which has often been assigned to writhing in the agonies of death. The true origin of this condition, is the unequal contraction of the muscular fibres, which causes fish and other animals to become stiff, during a short interval between death and the flaccid state preceding decomposition. As these fossil fishes maintain the altitude of the rigid stage immediately succeeding death, it follows that they were buried before putrefaction had commenced, and apparently in the same bituminous mud, the influx of which had caused their destruction. The dissemination of Copper and Bitumen through the slate

* Although it appears from the preservation of these animals, that certain parts of the Lias were deposited rapidly, there are also proofs of the lapse of much time during the deposition of other parts of this formation. See Notes in future Chapters on Coprolites and fossil Loligo.