

of the sediments, with the elimination of water and carbonic acid." To support this view, it is necessary to suppose that the rocks in question were formed during a period of the earth's history when the ocean had a considerably different relative proportion of mineral substances dissolved in its (then probably much warmer) waters; they are consequently assigned to a very early geological period, anterior indeed to what are usually termed the Palæozoic ages. It becomes further needful to discredit the belief that any gneiss or schist can belong to one of the later stages of the geological record, except doubtfully and merely locally. The more thoroughgoing advocates of the pristine, "azoic," or "eozoic," date, of the so-called "Metamorphic" or crystalline schists, do not hesitate to take this step, and endeavor, by ingenious explanations, to show that the majority of geologists (as in the case of the Alps, afterward referred to) have mistaken the geological structure of the districts where these rocks have been supposed to be metamorphosed equivalents of what elsewhere are Palæozoic, Secondary, or Tertiary strata.<sup>42</sup> Some of them even go so far as to assert that, by mere mineral characters, the crystalline rocks of contemporaneous periods can be identified all over the world. They assume that in the supposed chemical precipitation, the same general order has been followed everywhere over the floor of the ocean. Consequently a few hand-specimens of the crystalline rocks of a country are enough in their eyes to determine the geological position of these formations. Other geologists, recognizing that the more crystalline members of the series of schists graduate into rocks that are much less crystalline, and even into

---

<sup>42</sup> See Sterry Hunt's "Chemical Essays," p. 382 *et seq.*