

ancient American missed it, it was not for want of opportunity. Examples, as has been noted, of the accidental fusion of copper, by the sacrificial fires of the Mound-builders, repeatedly occur in the mounds of the Ohio valley. But no gifted native alchemist was prompt to read the lesson, and turn it to practical account.

Asia and Europe appear to have passed by a natural transition, step by step, from their rudest stages of lithic art, to polished stone, and then to implements of metal. Some of the steps were doubtless very slow. Worsaae believes that the use of bronze prevailed in Denmark "five or six hundred years before the birth of Christ." \* In Egypt it undoubtedly was known at a greatly earlier date. I still incline to my early formed opinion, that gold was the first metal worked. Found in nuggets, it could scarcely fail to attract attention. It was easy to fashion into shape; and some of the small, highly polished stone hammers seem fitter for this than any other work. † The abundant gold ornaments of the new world at the time of the discovery of Mexico and Peru accord with this idea. The like attraction of the bright native copper, is proved by its employment among the southern Indians for personal ornaments; and in this way the economic use of the metals may have been first suggested.

From the working of gold nuggets, or of virgin copper, with the hammer, to the smelting of the ores, was no trilling step; but that knowledge once gained, the threshold of civilization and true progress had been reached. The history of the grand achievement is embodied in the earliest myths both of the old and the new world. Tubal-Cain, Dedalus, Hephaestus, Vulcan, Vælund, Galant, the Luno of the Celtic Fingal, and Wayland, the Saxon smith-god, are but legendary variations of the first worker by whom the gift of metallurgy was communicated to man; and so too the new world has its Quetzalcoatl, or Vælund of the Aztecs, the divine instructor of their ancestors in the use of the metals. But whatever be the date of this wise instructor, no share of the knowledge communicated by him to that favoured race appears to have ever penetrated northward of the Mexican gulf.

It is vain to urge such dubious evidence as the fancied traces of a mould-ridge, or the solitary example of a casting of uncertain age, in proof of a knowledge of the furnace and the crucible among any North American tribe. Everywhere in Europe the soil yields not only its buried relics of gold, copper and bronze, but also stone and bronze moulds in which implements and personal ornaments were cast. When the ingenious systematizing of Danish archaeologists had familiarized the students of antiquity with the idea of a succession of stone, bronze, and iron periods, in the history of Europe, the question naturally followed whether metallurgy did not begin, there, as elsewhere, in the easy working of virgin copper. Dr. Latham accordingly remarked, in his "Ethnology of the British Islands," on the supposition that no unalloyed copper relics had been found in Britain: "Stone and bone first; then bronze, or copper and tin combined; but no copper alone. I cannot get over this hiatus; cannot imagine a metallurgic industry beginning with the use of alloys." It was a mistake, however, to assume that no copper relics had ever been found. At first it had been taken for granted that all such implements were of the familiar alloy. But so soon as the importance of the distinction was recognized, examples of pure copper were forthcoming. So early as 1822, Sir David Brewster described a large axe of

\* *Primeval Antiquities*, p. 135.

† *Prehistoric Annals of Scotland*, first ed., 1851, p. 214., second ed., vol. 1, p. 331.

peculiar shape, of a depth of two feet. The Scottish Mr. Wilde states that, on examination, the cells, are of iron, and formed tools.

It was a superior that could be regarded as a model. The characteristic source through which it came to be known eastward by

There was the ancient and when, perhaps, filling with a native race because, the voice from the scene northern countries Sanskrit-speakers spoke in its Sanskrit, Greek wanderings, wave, of Celtic prehistoric whatever of certain unsettled continued by art the Celtic civilization Aryan race, and, with the bounds.

With the came to an end, and in manner one crowding in

\* *Prehis*