ART. XXVII.—*Observations on Prehistoric Archæology in Greece;* by GEORGE FINLAY, LL.D.*

A FEW objects belonging to the stone period were observed in Greece before it was known that they are relics of the people who inhabited the country in prehistoric times. The pieces of obsidian, generally called flint by travelers, that were picked up on the tumulus of Marathon, were termed Persian arrow-heads. This arose from a strange misapplication of the mention of stone arrow-heads having been employed by the Ethiopians in the army of Xerxes by Herodotus (Polymnia, vii, 69), who says they used short arrows of reeds pointed with a stone with which they engraved their signets. But why Datis, who can hardly have had any Ethiopians in his army, thought it expedient to bring to Marathon immense quantities of stone arrow-heads has not been explained. They do not appear to have been likely to prove efficient missiles against Athenian hoplites. Yet a sagacious traveler like Dodwell, in 1805, says that he found "a great many small arrow-heads of black flint, which probably belonged to the Persian army."† Even Colonel Leske, the ablest and most observant of modern travelers, was misled by this opinion. He says, "while I was employed on the summit of the *Soros*, as the tumulus of the Athenians is called, my servant amused himself in gathering at the foot of the barrow, a great number of pieces of black flint which happened to strike his observation. These flints are so numerous, and have been so evidently chipped by art into their present form like gun flints, that there is good reason for believing them to have been the heads of arrows discharged by the Persians who fought at Marathon, and to have been interred with the Athenians after having been gathered from every part of the plain after the battle. Herodotus shows that some of the barbarians were armed in this manner, though his remark is applied not to the army of Darius but to that of Xerxes. Flint of this kind, if produced in any of the adjacent parts of Greece is at least very rare." (*Travels in Northern Greece*, vol. ii, p. 431). The great quantity and small size of the fragments found in the tumulus of Marathon caused the writer of these pages to doubt the possibility of these fragments having anything to do with the Persians, for such feeble weapons as they could form must have been useless against the panoply of the Greek infantry of the period. Had they been employed the glory of Marathon would be a vain boast. Sir William

* From a letter to Mr. H. T. DeForest, dated Athens, Feb. 26, 1870, communicated by him for this Journal.

† A classical and topographical tour through Greece during the years 1801, 1805 and 1806, by Edward Dodwell, Esq., vol. ii, p. 159.

Gell, in his *Itinerary of Greece*, page 166, mentions that similar fragments of flint are found at the σχίστη ὁδὸς, where was the tomb of Laius, and he adds "perhaps a confirmation of the discomfiture of the barbarians in the *Odos schiste.*" These fragments of obsidian, wherever they are found in Greece, are now admitted to be relics of prehistoric times, and a careful examination of the tumulus of Marathon convinced the writer of these pages, as early as the year 1835, that they were scattered about in the soil in their actual state when it was heaped up to form the tumulus over the bodies of the Athenians who were slain in the battle. The material is obsidian from the island of Melos. * * * *

No traditions of the existence of a stone period appear to have reached the inhabitants of Greece in historic times, though the mythical history of the remains of Tyrinths and Lykosura ascend almost to the prehistoric ages. As I have already mentioned, my attention was first called to the certainty that a numerous race of people in Greece used stone implements by the fragments of obsidian picked up on the tumulus at Marathon. I subsequently observed that similar fragments of obsidian are found in various parts of the neighborhood in the rear of the Greek position, and far out of reach of the arrows of the Persians. I also found myself similar chips of obsidian over all Attica, and in many parts of Greece, and several of the islands of the Archipelago, where no native obsidian can ever have existed, which I visited after my attention was directed to the subject. I have picked up these so-called Persian arrow-heads even in the now barren island of Hydra. My first notice on the subject was published in the year 1836. In that year, while examining the topography of Attica I discovered the extensive deposit of fossil bones at Pikermi, of which there is a valuable collection in the Museum of Natural History at Athens. A detailed description of these remarkable fossil bones was published by Professor Roth of Munich, in the Transactions of the Royal Academy of Bavaria, and they have since been described in the splendid work of Monsieur A. Gaudry, *Animaux fossiles et Geologie de l'Attique.* In a notice of the discovery which I read at a meeting of the Society of Natural History of Athens on 13th December, 1836, I observed that I had picked up fragments of obsidian, called Persian arrow-heads, not only on the tumulus of Marathon but also at Liosia near Aphidna, at Kakosialesi near Tanagra, and at Aghios Kosmas on the Attic coast. When my memoir on the battle of Marathon, which was read to the Royal Society of Literature in January, 1838, was printed, I added a note "concerning the pieces of flint called Persian arrow-heads found in the tumulus at Marathon." (Transactions of the Royal Society of Literature, first series, 4to, vol. iii, p. 392).

I have since collected several specimens of stone implements, particularly celts, that is, axes and chisels very similar in form to those found in the lake dwellings of Switzerland. I have obtained six specimens of jade, one of which I have presented to the Museum, with a similar piece which I procured at Robenhausen. I have also a fine small axe of nephrite, and several others of extremely hard stones. Unfortunately it has not yet been in my power to ascertain the precise mineralogical character of the most remarkable of my specimens.

I have obtained several fine specimens from Dobrena (the site of the ancient Thisbe) where a lake must have existed in prehistoric times, and where there is still a marsh. Two small axes found at Orchomenas, near the lake Copaïs, were given to me by Mr. Merlin, Her Majesty's Consul for Northern Greece.

Lake dwellings continued to exist in Macedonia down to the time of Herodotus. His description (Terpsichore, v, 16) proves that the dwellings of the Pæonians, in the Lake Prasias, were very similar to those constructed on the lakes of Switzerland. "They who dwell on the lake Prasias construct their dwellings in this manner. They fix strong piles in the lake, and on these piles they fasten planks, making a bridge with a narrow entrance from the land. The piles supporting the planks were in former times fixed by the inhabitants in common, but afterward the law established that every one who married a wife (and they take many wives), should bring down from Mount Orbelos three piles and fix them in the lake. The manner of their dwellings is in this fashion. Each man has his own hut on the piles, and a trap door through the flooring by which he can descend to the lake. The young children are tied by the foot lest they should fall into the water." The lake Prasias is the lake of the Strymon of Thucydides, v, 7, the Kerkinites of Arrian, Anab. I, 11, 3, and is now called Tachynós, from a village on its western side. The fisheries are still valuable as they were in ancient times, and the fish caught for sale are principally carp, tench and eels. (Leake, Travels in Northern Greece, vol. iii, 198).

The description which Herodotus gives of these lake dwellings makes it an object of the greatest importance to the archælogists of Switzerland and Greece that the lake Prasias and other lakes in Macedonia, Thessaly and Greece, should be carefully examined in order to ascertain whether any traces can still be discovered of lake dwellings. Some traces of the piles on which dwellings were constructed are said to have been observed in the lake Prasias, in 1862, by Monsieur Deville of *l'Ecole française d'Athénes.* But a superficial examination might easily lead to considering stakes for nets or fishing huts

as remains of ancient pile dwellings, and a searching examination of the locality ought to be undertaken by skillful and experienced observers.

The lakes in Greece that deserve particular attention are, the lake Copais, Hylica or Livadi, and Paralimni in Bœotia, the lake Trichonis with its connected lake Hyrie in Etalia, the lakes in Acarnania and the lagoons between the mouths of the Evenus and the Achelous. In the Peloponnesus there are, the lakes of Pheneus (which becomes in alternate periods of years a deep lake as at present, and a plain that dries in summers as it was in the year 1821), and Stymphalus, with their physical peculiarities and mythical associations running back toward a prehistoric period. The lake of Orchomenos, the marsh of Mantinea, the lakes near Tegea, the lagoons at the mouths of the Eurotas and the Alpheus, and the marsh at Pylos, (Palæo Avarino) all these places, and some others that might be pointed out, offer an extensive field for research. It may also be possible to identify sites of prehistoric habitations in the mountains, from the remains found in their vicinity. Such positions would have been selected because they were easily defensible by men having weapons of stone only. They must have commanded access to an abundant supply of water equally capable of defense. I have observed such a position overlooking the plain of Aphidna, where I have picked up a considerable quantity of fragments of obsidian and flint artificially worked.

Pliny contains several passages in his Natural History that refer to stone axes and chisels (celts), with particular reference to those found in Greece, for he quotes Greek authorities about them. He speaks of *Ceraunicæ* (thunderbolts) as being, according to the testimony of Sotacus (an ancient Greek writer on minerals), black and red, and resembling axe-heads in shape. I have specimens of red celts from Eubœa made of red iron-stone, one $3\frac{3}{4}$ in. long and 2 in. broad; and several that are black, of the same size but narrower.

The stone period has been divided into a paleolithic and a neolithic period. In western Europe, particularly in France and England, numerous remains of stone implements of the paleolithic period have been found in strata with the bones of the mammoth and other extinct animals. But I am not aware that any stone implements that can be attributed with any certainty to this period, have yet been discovered in Greece, though bones of these animals have been found in several places in great quantities both in Attica, Eubœa and Arcadia. All the stone implements that have fallen under my notice consist of specimens that belong to the neolithic or polished-stone period, and many display considerable skill in their workmanship, being composed of the hardest stones.