ARCHAEOLOGY

Stone Age, Bronze Age and Iron Age In Sweden

"A Classic of Science"

Montellius showed that the civilizations of prehistoric man developed in this order. Modern man finds iron easier to work than copper, but our early forebears universally used copper-tin bronze before they learned to reduce iron ores.

THE CIVILIZATION OF SWEDEN IN HEATHEN TIMES, by Oscar Montellius, Translated by Rev. F. H. Woods. London and New York, Macmillan, 1888.

THE HISTORY of the earliest inhabitants of the North was till about fifty years ago shrouded in obscurity. It was not till then that antiquarians began generally to recognize that the antiquities which are dug up from time to time, and the barrows and stone monuments which still abound throughout the country, do not all belong to that part of heathen times which immediately preceded the introduction of Christianity, and of which the Icelandic sagas relate. When Ansgar first came to Sweden in the ninth century, the use of iron was universal in the country, and had been so for a long time. A careful investigation of the antiquities has shown, however, that before that period, now usually known as the Iron Age, there was another, when iron was altogether unknown, in which weapons and tools were made of bronze, a mixture of copper and tin. This period, called the Bronze Age, had, as well as the Iron Age, continued for many centuries. But before the beginning of the Bronze Age Sweden had for a very long time been inhabited by people who lived in entire ignorance of the use of the metals, and were therefore compelled to make their instruments and weapons of such materials as stone, horn, bone, and wood. This last period is known therefore as the Stone Age. . . .

That there was a time when all metals were entirely unknown is clearly seen from the many large finds and the hundreds of remarkable graves containing numerous relics of stone, bone, etc., but no trace of metal. That there was another period when the use of bronze, but not of iron, was known, is equally clear from the large number of hoards and graves which contain weapons, ornaments, etc., of bronze, but no trace of iron; while on the other hand bronze implements are hardly ever found with those of iron. That there was a third period in heathen times when iron was in general use we can see by the first glance at any large collection of antiquities. From this it follows of necessity that the earliest history of Northern culture—the time antecedent to the establishment of Christianity—actually embraces the three great periods which derive their names from the most important material in use during each of them.

And there can hardly be any doubt of the order in which these periods followed each other. That the Stone Age must be older than the Bronze Age is self-evident, and is further proved by the fact that we often find graves of the Bronze Age in the upper part of barrows which have been raised over a grave chamber of the Stone Age which usually lies at the bottom in the center of the barrow, while the converse has never occurred. And our earliest sources of history which throw light on the conditions of life during the last part of heathen times point only to a period when iron was in general use. It follows therefore that the Iron Age must be the last of these three periods.

The Stone Age

Relics of the Stone Age have been found in almost every country in the world, in England and in France, as well as beneath the classical soil of Italy and Greece, in Egypt, Asia Minor, and India, as well as in China and Japan.

The most important contribution to our knowledge of the Stone Age was made by the discovery of the lake-dwellings in Switzerland—in the winter of 1854-5. Since then remains of these peculiar buildings have been found in many different places, both in Switzerland and other countries. They were built up out of the water upon thousands of piles driven into the bottom of the lake. Many of these buildings had been burnt, or destroyed from some other cause, during the Stone Age; others are later. In many cases the peat formed over the ruins has preserved even the smallest and most delicate parts of their contents. These remarkable discoveries point to a people of the Stone Age with fixed dwelling places engaged in pasturage and tillage, with many other proofs of a higher culture than we are accustomed to ascribe to this period.

That a Stone Age is not necessarily accompanied by an entire want of culture, is shown also by the surprisingly high civilization which existed in Tahiti even before the first visit of the Europeans. And yet the inhabitants of this island were so completely ignorant of metals, that at first they planted the iron needles got from Cook's people in

WARRIOR OF 300 A.D.

This Swedish soldier of the Iron Age wore woolen clothes woven in pattern from green and yellow yarn. His shoes were of tooled leather, his helmet of silver-gilt. An iron coat-of-mail and a wooden shield trimmed with metal protected him from his enemy's sword and arrows. Illustration from Montellius.

their gardens, believing that they were shoots of some very hard plant, out of which they hoped that the life was not altogether extinct.

After the Stone Age had come to an end the true meaning of the stone implements was soon forgotten. When they were from time to time found in the ground they were called "thunder bolts" or "Thor's bolts", and were believed to have fallen with the lightning. This belief and this name, both still very general in Sweden, are found also to a remarkable extent in all parts of the world, from Japan to South America. . . .

The Bronze Age

Before the Stone Age ended the inhabitants of Sweden had raised themselves considerably above the savage state; but, so long as they were completely ignorant of metals, it was impossible for them to reach a higher degree of civilization. But at last the fruits of the civilization attained by the cultured races of the East spread to the distant regions of the North; and through the knowledge of metals, at first only bronze and gold, there began for those lands a new era known as the Bronze Age.

By these words is understood that period in the earliest civilization of the Northern races, when they made their weapons, tools, etc., of bronze, a mixture of copper and tin. Besides bronze, they knew only of one metal, namely, gold. Iron, steel, silver, and all other metals were still completely unknown in these countries.

Before we go further we must call attention to the inaccuracy of an opinion which not unfrequently finds expression, that all antiquities of bronze should be referred by antiquarians to the Bronze Age. Vessels, rings, buckles, needles and the like were, as we might have supposed, still made of bronze after the end of this period, just as they are even in our own day, but generally of a somewhat different composition from that used in the Bronze Age. To this age belong only weapons and edge-tools made of bronze, and such vessels and ornaments as are usually found with them. . . .

We have already mentioned that the end of the Stone Age, and therefore the beginning of the Bronze Age, in the North, must be regarded as having taken place 3,500 years ago. The latest investigations have shown that the Bronze Age proper came to an end in these regions in the beginning of the fifth century, B.C. It lasted therefore about a thousand years. . . .

The Iron Age

By "The Iron Age" is understood, as we have already seen, that part of *heathen times* in which iron was known. We might certainly say, if we regarded only the proper meaning of the words, that the Iron Age is even now still going on; but for the antiquarian's purposes the Iron Age in Sweden ends with the victory of Christianity over the Asa-gods.

During the Iron Age the inhabitants of Sweden became first acquainted with iron, silver, brass, lead, glass, stamped coins (of foreign production), and learnt the art of soldering and gilding metal, etc., etc. And as works of iron could not, like those of bronze, be produced only by casting, the smith's craft came to have far greater significance than it had had during the Bronze Age. But of the new discoveries of this period one of the most important was the art of writing, which the inhabitants of the North seem to have acquired soon after the beginning of the Christian era. The earliest alphabetical symbols in Sweden —indeed the only ones used in that country during the whole of heathen times—were the *runes*.

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PHYSIOLOGY

Migraine Headaches Believed Like Hives on Brain

DEBILITATING migraine headaches, from which four per cent. of our population suffers, are like hives of the brain, it appears from researches of Drs. Ray M. Balyeat and Herbert J. Rinkel of Oklahoma City.

In hives of the skin, there is a dilatation of the blood vessels of the skin followed by swelling due to accumulation of fluid in the tissues. In migraine, the same condition exists in the brain, the Oklahoma City scientists believe.

Nor is this the only resemblance between the two conditions. Migraine, urticaria or hives, asthma and hay fever, and even epilepsy seem to go together. One patient may suffer from one or several of these conditions, and usually one or all of them have appeared in other members of his family, Drs. Balyeat and Rinkel found from their studies of several hundred persons.

Migraine, like asthma, hay fever and urticaria, is caused by sensitization to certain proteins, either in food or in pollens or animal hair. Their method of treatment is based on elimination of the offending protein from the diet or the environment. With migraine, it is usually a dietary protein.

About 4,000,000 people in the United States today suffer from migraine. Of these, at least 1,000,000 are under 12 years of age, Dr. Balyeat calculated.

Migraine is more common among business men, teachers and professors than in the population at large. Day laborers are rarely afflicted by it.

Migraine headaches are generally known as sick headaches, because they are almost always accompanied by nausea and vomiting. The attacks occur at varying intervals, sometimes every two or three weeks and sometimes every two or three months. Once in three weeks was the average.

Typical attacks of migraine have four stages. In the first one the patient usually feels nervous and irritable, sometimes drowsy, and the sleep is often unnatural the night before the headache. The second stage is characterized by faintness or dizziness, spots before the eyes or other visual disturbances. The third stage is while the actual headache and accompanying nausea are present. During the fourth or post-migrainal stage, the patient generally is exhausted, sleepy, and may suffer from a watery nasal discharge, similar to that of a cold or hay fever.

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