

primitive Aryan tongue were nomad herdsmen, who had domesticated the dog, who wandered over the plains of Europe in waggons drawn by oxen, who fashioned canoes out of the trunks of trees, but were ignorant of any metal, with the possible exception of native copper. In the summer they lived in huts, built of branches of trees, and thatched with reeds; in winter they dwelt in circular pits dug in the earth, and roofed over with poles, covered with sods of turf, or plastered with the dung of cattle. They were clad in skins sewn together with bone needles; they were acquainted with fire, which they kindled by means of fire-sticks or pyrites; and they were able to count up to a hundred. If they practised agriculture, which is doubtful, it must have been of a very primitive kind; but they probably collected and pounded in stone mortars the seeds of some wild cereal, either spelt or barley. The only social institution was marriage; but they were polygamists, and practised human sacrifice. Whether they ate the bodies of enemies slain in war is doubtful. There were no enclosures, and property consisted in cattle and not in land. They believed in a future life; their religion was shamanistic; they had no idols, and probably no gods properly so-called, but revered in some vague way the powers of nature.

This general picture of primitive Aryan culture has now to be substantiated in detail, and the gradual progress in civilisation and the arts of life has to be traced from the scanty materials which we possess.

Metals

That the Aryans before the linguistic separation, were still in the stone age may be inferred from the fact that no Aryan etymology has been found for the word "metal," which is regarded by Oppert and Renan as a Semitic loan-word obtained from the Phoenicians. There is no common word in Aryan speech to denote the art of the smith,

and many of the words relating to his trade refer primarily to stone. Each of the Aryan families of speech has an independent name for the smith, a sufficient proof that the arts of smelting and forging metal were later than the linguistic separation. More especially the old theory that the Celts were the vanguard of the Aryan race, who brought with them into Europe the knowledge of metals, falls to the ground, in face of the fact that the Celts have for the smith their own peculiar designation, *goba*, which bears no resemblance to the corresponding words in other Aryan languages, such, for instance, as the Latin *faber*, the Greek *chalkous*, the Teutonic *smid*, or the Slavonic *vutri*. . .

Cattle

The wealth of these primitive people consisted almost wholly of their herds. This is indicated by the fact that the collective name for cattle, which appears in Latin, Sanskrit, Zend, Lithuanian, and German, denoting originally that which has been tied up, has been the source of numerous words denoting property and money, such as *peculium* and *pecunia* in Latin, and our *fee*, which is the Anglo-Saxon *feoh*, meaning both property and cattle, and identical with the German *vieh*, a cow. The ox, which is figured on early Roman coins, may be a survival from the time when the ox was the standard value and the medium of exchange, and the coin may probably have at first represented the value

of the animal. This is supported by the fact that in the Homeric age the measure of value was the ox. The arms of Diomed are worth nine oxen, those of Glaucus are worth an hundred. The tripod, which was the first prize for the wrestlers, was worth twelve oxen. One female slave is valued at twenty oxen, another at four. . . .

Dress

The clothing of the Aryans of the neolithic and even of the bronze age consisted chiefly of the skins of beasts, the flesh, and perhaps the hair, having been removed by stone scrapers, which are extremely numerous, even as late as the bronze age. These skins were sewn together by means of bone needles, which are found in great abundance. Caesar says of the Britons *pellibus sunt vestiti*, and Tacitus tells us that the same was the case with some of the Germans. In the Swiss and Italian pile dwellings fragments of leather, tanned by some rude but effective process, have been found.

Flax, whose very name implies that it was used for weaving (Latin *plecto*, German *flechten*), was spun and woven by the women of the neolithic household, as is evidenced by the spindle whorls and loom weights so abundantly found in the Swiss dwellings of the stone age. In several settlements linen fabrics have been discovered. The threads of the warp, consisting of two fibres of flax twisted together, must have been hung with weights from a

MEDICINE

Sick Scientist Calls "Mild" Wrong Word for Typhus

TYPHUS FEVER in the United States is officially termed mild endemic American typhus. Dr. R. E. Dyer, U. S. Public Health Service scientist who was stricken with the disease while investigating it, now thinks the word mild hardly strong enough to describe it.

"Where do they get that mild stuff?" Dr. Dyer ironically asked fellow scientists who have visited him at the U. S. Naval Hospital where he is slowly recovering from the disease.

Dr. Dyer has been ill since October 1, and is not yet able to sit up, though he is already directing the work of his

assistants in the laboratory. Visitors find that he shows plainly the effect of the acute illness he has suffered. He is haggard and has the appearance of a man who has been very sick. His normally strong, masculine voice is now weak and quavering. Yet he has retained his optimistic outlook on life and is keenly interested in the typhus fever research.

Dr. Dyer directed the work which resulted in discovering the flea as the carrier of American typhus fever, and he and his associates have been trying to develop a vaccine to give immunity to the disease.

Science News Letter, October 29, 1932

Shower of Stars

Which fell on the night of Nov. 12-13, 1833, is described by eyewitnesses in

THE NEXT CLASSIC OF SCIENCE