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"Bone Age" Man

Before the Old Stone Age got well into its stride, there was a "Bone Age" prelude.

This view of man's cultural beginnings comes from Vienna. Prof. Oswald Menghin of the University of Vienna described to the Symposium bone tools found in Europe and Asia. So crudely are these tools worked, he said, that doubt has arisen whether some of these bones were artificially treated at all.

Prof. Menghin's own view is that the bone implements were earliest among the three great streams of culture that developed early in the Old Stone Age. The bone industries had their original home, in his opinion, in northern Asia.

Later was developed the flake-culture, by which Stone Age man learned to strike a flake from a core of stone. Abandoning the core, the stone-worker would shape the flake into a serviceable tool. This flake-culture, the Viennese archaeologist said, probably had its cradle-land in the steppe region of Eurasia.

Still later, was introduced a more advanced technique of stone work. This was the core- or handaxe-culture. Stone Age men chipped off fragments from a piece of rock, and shaped the core that remained into a tool. The home of this Stone Age technique is probably India, said Prof. Menghin.

The cradle-lands for these ancient methods of workmanship are located tentatively by Prof. Menghin in parts of the world where only one of the methods was known. In some parts of the Old World, flake-culture and core-culture existed side by side or mixed together.

Problems of the origin of the Eskimos, and their ancestry in the Old Stone Age were raised by Prof. Kaj Birket-Smith, of the National Museum in Copenhagen. The theory that Caribou Eskimos, who live west of Hudson Bay, are "more or less direct descendants of the primeval Eskimos" was advanced by the Danish anthropologist.

While other Eskimos have adapted their lives to the sea and ice, hunting seal and walrus, the Caribou Eskimos have remained an inland people who hunt caribou.

"An analysis of their culture reveals the fact that they have many elements in common with sequestered areas both in North America and Northern Eurasia," Prof. Birket-Smith said. "And it would seem, therefore, that over the

whole of this region there are traces of an old common culture."

This is far from showing the connection of the Eskimos with the Old Stone Age, he added, but it may give a hint of where to hunt for the ancestry of these northern, specialized people.

"It is pleasant to record," he said,

"that both the International Congress of Anthropological and Ethnological Sciences and the International Congress of Proto- and Prehistoric Sciences have taken up the plans for an international investigation of this important question."

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PHYSIOLOGY

Gland-Like Action by Nerves Demonstrated in Invertebrates

Nerve Cells Secrete Physiologically Powerful Substances As Do the Specialized Endocrine Glands

THE NERVOUS system is also a glandular system. Nerve cells secrete physiologically powerful substances just as do the cells of the thyroid, pituitary, adrenal, and other specialized glands of the body. Known for some years as a basic fact in the life of backboneed animals, this has now been extended to include invertebrates as well, through the work of a German woman scientist, Dr. Berta Scharrer of Frankfurt-am-Main.

Dr. Scharrer reviews briefly the work of pioneers in the investigation of neuro-secretory phenomena of vertebrates, that led to her investigations among the so-called lower animals. Another German, F. W. Kroll, pointed out the presence of gland-like secretions within the brain. The brilliant researches of an American physiologist, Dr. G. H. Parker of Harvard, demonstrated the formation and important functioning of secretions which he called neurohumors at the ends of nerves.

There followed an intensive search for secretory cells and tissues within the nervous centers. During the past nine years a considerable number of researchers, in lands ranging from Spain to Japan, and including Dr. Scharrer herself, have conducted microscopic studies of suspected nerve masses, and have found the sought-for "neuro-glandular cells" to be very widely distributed among vertebrate animals.

During the past three years Dr. Scharrer has been making thin sections of the bodies of all manner of invertebrates—worms, mollusks, myriapods, insects—from a geographic range that includes Naples, the South African coast, and several points in Germany.

In the nervous systems of all of them she has found gland-like, secreting cells.

The cells do not seem different, on superficial examination by ordinary microscopic means, from the thousands of other nerve cells that surround them. But upon treatment with appropriate chemical reagents, the protoplasm in the neighborhood of the nucleus is shown to be crowded with what Dr. Scharrer calls "secretion droplets."

All these discoveries that point to a gland-like action of nerves have been the work of a very few years. What their significance may be the work of the next few years may disclose. It is a new window in the wall of the lookout tower of science.

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ENGINEERING

Lamp Has Varying Focus For Use In Different Ways

A VARIABLE focus lamp shade, one which may literally be turned inside out, or changed to any focus by the mere turn of a thumbscrew, has been patented (No. 2,063,504) by three New York City inventors.

With this shade, the light intensity, spread of light, the height to which a wall can be illuminated, may all be increased or decreased at will.

Made of parchment paper, thin sheet metal or plastic, in flat position the shade takes on the appearance of a split ring. One of the split edges can ride over the other, and overlap to any extent by turning a thumb screw on the shade. This causes the shade to take on a conical shape of any desired focus.

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