

come again when coinage of bronze will cease."

Dr. Caley, in charge of the chemical laboratory at the Athenian Market Place—the first chemical laboratory ever set up at a Greek archaeological site—told of detecting a sudden change in bronze coins about the middle of the second century B. C. Apparently the tin supply was cut off, and coins were then made from scrap bronze which could be used in coinage by melting it with lead.

The coins shed light on economic history, Dr. Caley reported, by showing that long before Caesar's military campaigns in Europe cut off Britain's overland exports of tin to the Mediterranean, the tin trade was apparently halted on the seas by the destruction of Carthage in 146 B. C. That defeat ended the famous sea trade in tin, by which the Phoenicians and their later brethren the Carthaginians supplied the civilized world with this metal from Britain.

Rome's imperial coinage also reflected this scarcity of tin, Dr. Caley has found. From about the beginning of the Christian era, Rome's minor coins were of pure copper, or copper-zinc alloy. The tin-copper alloy, called bronze, disappeared as coin material in ancient times, not to be resumed to any extent until the United States and European countries revived bronze coins about the middle of the past century.

African Women Gangs

African women gang together to safeguard "women's rights" and they meet in secret society—no men allowed.

So an American expedition has found, studying the little-known Sherbro people of Sierra Leone, in British West Africa.

Both men and women of this tribe have their secret societies, from which the opposite sex is rigidly excluded, H. U. Hall told the American Philosophical Society in reporting a study of customs sponsored by the Society and the University Museum, University of Pennsylvania.

Until British authority became effective in southern Sierra Leone, the men's secret society held even more power than the native chieftains, especially in maintaining law and order. It is still powerful and flourishing, Mr. Hall said. Not to be a "Poro" man, as the society is called, is not to be a man at all, in Sherbro opinion.

"The counterpart of the Poro, for Sherbro women," said Mr. Hall, "is the Bondo Society. It is the champion of women's rights and privileges. Novices

are instructed in these and in the duties of womanhood during a period of seclusion in the Bondo Bush, or grove, similar to that undergone by Poro initiants in their Bush."

Creates Dual Personality

Dual personality has been created experimentally in the psychological laboratory at the University of Illinois, by the use of the South American arrow poison, curare, Dr. E. A. Culler told the meeting.

Actions learned in one personality are forgotten during life in the other personality, he said. Dogs were the subjects of this Jekyll-Hyde experiment; the drug, by depressing the brain caused the animals to act on a different level of the nervous system.

Normally, learning takes place in the cortex of the brain, but when the brain is affected by a powerful drug such as curare, learning can take place at a lower level involving, presumably, subcortical parts of the nervous system.

But what is learned during the normal personality is forgotten under the influence of curare. What is learned during the curare personality, when the animal is functioning at the lower level,

is similarly forgotten when he returns to his normal personality.

Eggs Without Nuclei

Eggs of lower animals can develop without nuclei, either their own or those normally received from the sperm cells in fertilization, stated Dr. Ethel Browne Harvey, who worked on the problem at Woods Hole, Mass., and Naples, Italy, under a grant from the American Philosophical Society.

Dr. Harvey whirled sea urchin eggs in a centrifuge, subjecting them to a force 10,000 times gravity. This whirled the eggs in two, with the nuclei in the lighter halves. Then she applied chemicals and physical stimuli to the parts without nuclei, which caused the cells to divide and start development.

Division and arrangement of parts went on as though the cells were normally nucleated, until there were about 500 of them in the group and they had reached a definite early stage in organic development known as the blastula stage. These rudimentary organisms without nuclei lived in some cases as long as four weeks, whereas normal unfertilized sea-urchin eggs commonly die in a day or two.

Science News Letter, December 4, 1937

DOCUMENTATION

Page Selector for Bibliofilm Reading Apparatus Patented

AN AUTOMATIC page selector for users of bibliofilm reading machines (for reading books and documents recorded on motion picture film) was patented by Dr. Rupert H. Draeger, U. S. naval surgeon now on his way to join the Asiatic fleet.

The device, which stops the electrically driven projector for the film on which documents are recorded when a predetermined page has been reached, is one of a large number of microfilm appliances developed by Dr. Draeger at the instance of the Documentation Division of Science Service, the non-profit institution for the popularization of science.

Patent No. 2,099,682 covers the apparatus. Funds of the Chemical Foundation aided Dr. Draeger in his experimental work.

Object of the microfilm service, sponsored by the American Documentation Institute, is the recording on tiny photo-

graphic film bulky document files. The page selector is a part of the special projector required to read documents so recorded.

The machine, which takes advantage of the fact that motion picture film, with perforations along its edges, is used for recording the books, uses an electric motor and a variation of a standard counting device to stop the film strip when the proper page has been reached.

Science News Letter, December 4, 1937

GENERAL SCIENCE

Science's Impact on Society To Be Studied by A. A. A. S.

A TWO-YEAR plan for discussing the impact of science upon human beings, both as members of society and as individuals, was announced by Dr. F. R. Moulton, permanent secretary of the American Association for the Advancement of Science.

The fundamental resources of the world in which we live will be explored in extensive conferences during A.A.A.S. meetings the last week in December at Indianapolis. Agriculture, minerals, forests, power, capital, man power and its use, scientific methods in business, research laboratories and economic development factors will be covered by special papers by experts.

Subsequent semi-annual conferences will be devoted to standards of living as affected by science, the economic system in relation to economic progress, government policies and science, and finally, science and human beings. Dr. Harold G. Moulton, president of the Brookings Institution, Washington, is organizing the inquiry and will deliver the opening address.

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EXPLORATION

Botanist-Missionary Returns; Navigated Difficult Strait

Plants, Insects, Minerals and Ancient Weapons Are Among the Treasures Brought Back From Arctic Trip

BACK again from the far Canadian Arctic, the missionary-botanist Père Arthème Dutilly is sorting specimens in the laboratories of the Catholic University of America. He has brought 1200 sheets of pressed plants, 1000 insects, several scores of soil and mineral samples, and a large number of old-time weapons and tools of the Eskimos.

The Eskimo people, Père Dutilly reports, are changing fast, abandoning and even making fun of the finely wrought ivory harpoons, bone needles, etc., they formerly used, and substituting steel and other metals wherever they can. So it is easy to get excellent old implements for museum purposes.

In their clothing as well the Eskimos are rapidly becoming "westernized." Older members of the family may stick to the traditional fur parka, but the younger generation must have sweaters and even rubber-soled sneakers, at least for summer wear. Even in five years the amount of changes has been notable, among the Eskimos near trading posts.

Père Dutilly's farthest north this year was only about 70 degrees north latitude, at a small island just off the coast of Baffin Land, called Iglulik. This is a settlement of about 270 persons—a veritable metropolis, as Eskimo towns go.

To get to Iglulik it was necessary to pass through a long reach of water noted on the maps as Frozen Strait, supposedly a very difficult thing to do. Père Dutilly gives great credit to the commander of the Oblate Missionaries' 120-ton motor vessel "Thérèse," Capt. Joseph

Levesque, for the easy and safe passage.

During the entire voyage, constant radio communication with trading posts, other vessels, and civilization far to the south was maintained, as well as daily broadcasts from the "Thérèse." Père Dutilly was radio operator as well as botanist. In addition, he played the part of Daniel Boone afloat, killing a huge polar bear overtaken by the boat, with a single well-placed shot.

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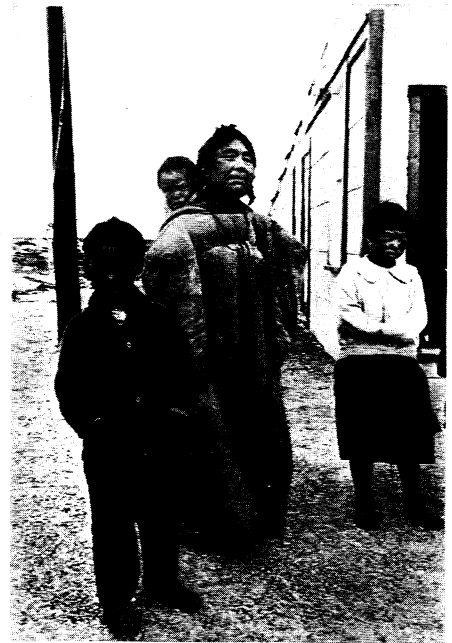
ARCHAEOLOGY

Greenland Relics Show How Eskimos Conquered Vikings

WAR IN THE North, long before the days of Columbus, waged in the ice and snow of America's Arctic between white invading Norsemen and native Eskimos, is now being discovered by science.

To the Smithsonian Institution, a modern Norseman, Dr. Therkel Mathiassen of the Danish National Museum, reports that Greenland's Arctic earth is relinquishing tragic trophies of Norsemen massacred when the white pioneers of about 1350 attempted to get a foothold in the New World. These could not be peaceful gifts, Dr. Mathiassen reasons. Norse colonists would never have given natives their churchbells to turn into hammers or eardrops, for example.

Dr. Mathiassen, who has spent nine summers exploring the Canadian Arctic and Greenland for clues to the Eskimos' prehistory, found the Eskimo village containing these Norse relics at a



JEUNESSE EXOTIQUE

*Mother, in parka, remains old-fashioned, but the younger set affect London modes
—via Hudson Bay Company.*

little island called Inugsuk, off northwest Greenland.

This Eskimo story, so far pieced together, shows Eskimo migrations in a rough way for the past thousand years. A village site in the Canadian Arctic, unearthed by a Danish expedition in 1922, revealed ancient Eskimos there who had been whale and seal hunters and who used materials obtained from these sea creatures in their houses, clothes, and utensils. These Eskimos had probably come originally eastward from Alaska or Siberia. Some reached Greenland and became its first Eskimo inhabitants.

The site at Inugsuk, Greenland, containing Norse relics, shows these Eskimos at a later time, when they had acquired new inventions, and even seem to have borrowed ideas from medieval Norsemen, who were five or six hundred miles away to the south. Linking these Eskimos with the Norse settlers enables archaeologists to date this state of Eskimo culture definitely in the thirteenth and fourteenth centuries.

This was the era when Eskimos and Norsemen fought it out. The Eskimos won. Like Indians in the United States, the Eskimos did not start fighting white men in earnest for some time after their arrival. Eric the Red had discovered Greenland in 985, and Norse colonies were soon planted, but it was not until about 1200 that Norsemen in Greenland