ANTHROPOLGY

# Tools Tell of Evolution

➤ THE TOOLS early man left behind him tell scientists more about man's evolution than do his bones, the American Anthropological Society was told in Minneapolis, Minn.

Dr. Leo A. Estel of Ohio State University reported that the most important developments in man's evolution can be found from his cultural remains and by ethnological observations.

The brain, not the bones, is the most important factor in human evolution, he said.

The broad outlines of the evolution of man's skeleton are well known. They fit with what is known of the evolution of apes. However, the evolution of the important soft tissues of humans is less well known, and that of the central nervous system and the brain, except roughly for size and configuration, is not known. A long-dead skull does not reveal much about the brain once housed in it.

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## Depends on Affection

➤ IN ORDER for a monkey to develop a satisfying sexual relationship as an adult, it is necessary for him to have developed, in early infancy, normal, non-sexual affection for another infant monkey, Dr. Harry F. Harlow, University of Wisconsin psychologist, told the American Anthropological Association meeting in Minneapolis, Minn.

One monkey does not learn affection for another baby by generalization from his love for his mother, Dr. Harlow said. The first stage of a baby's affection for another baby is just a matter of propinquity, he said.

For the first month of life, a monkey is interested in exploration of the inanimate world. But when he is one month old, he will become curious about another living baby. Very soon he is romping with him and, especially if the baby is a male, he is engaged in rough-and-tumble play, Dr. Harlow reported.

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PSYCHOLOGY

# Describe Antarctic Rigors

➤ INTELLIGENCE, education and age have proved important factors in the emotional stresses encountered in life at an Australian Antarctic station. But these have not proved similarly significant in American bases.

In the Australian experience, they are a vital factor in stressful situations that may arise in the frozen continent, Philip Law, director of the Antarctic Division of External Affairs in Australia, reports.

"All our experience underlines the basic importance of intelligence and education, and much trouble at a station is avoided if men can be chosen who have a reasonable measure of both," Mr. Law says.

Such men are more flexible and are not easily bored. Consequently, they are more self-sufficient, and, in Mr. Law's experience, "they have the sense to analyze situations and to use their minds to control their reactions." Although he does not draw a line regarding age, he observes that it is unusual for a man past 40 to possess the necessary physical drive and energy.

The Australian Antarctic authority also makes the point that in his experience serious breakdowns in the Antarctic occur mostly in young men less than 25 years of age. The worst cases of mental disturbance apparently occurred within from two to eight weeks of the departure of the relief ship that landed the men.

"Apparently the impact of the environment is immediate and severe," Mr. Law notes in Discovery, Oct. 1960.

American Antarctic authorities agree that the impact of the environment tends to be immediate. A lower ebb in general morale occurs upon arrival in Antarctica and often continues while the relief ship still is at the base.

Morale tends to improve, however, when the Antarctic worker begins to take on his assigned responsibility after the ship leaves, Dr. Albert P. Crary, chief scientist for the U. S. Antarctic Research Program, told SCIENCE SERVICE.

There have been no breakdowns in the American experience in Antarctic. Dr. Crary discounted both age, intelligence and experience in themselves as significant in ability to withstand stress of a remote, cold and harsh environment.

"Maturity cannot always be measured by age," Dr. Crary said. "Nor is experience necessarily an assurance of good adjustment," Dr. Crary said, warning against generalizations.

He noted that some of his most proved colleagues in the Antarctic have been young men, recent college graduates, with no experience.

"However, some men of experience always are desirable," he said.

It happens that most of the "experienced men" in the U. S. Antarctic program are well past the age 40. Soviet Antarctic scientists and workers may range in age from later 20's to well past 40; so age, apparently, is not a factor in their choice of Antarctic personnel.

"It is more important to have the man and job well matched than choose men of certain age, training or experience," Dr. Crary declared.

After selection on the basis of job needs and requirements, U. S. Antarctic candidates are sent to the U. S. Navy Hospital, Bethesda, Md., for a complete physical and psychological examination. Dr. Crary attributes the absence of mental breakdowns among U. S. Antarctic personnel to this careful screening.

Also, men on U. S. bases are not as isolated as those on Australian bases. Planes can make contact from October to March; and during the few months of wintering over, there is frequent and regular radio communication with family and friends in the United States through "ham" radio operators and the Red Cross.

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ARCHAEOLOGY

## The Reign of Abimelech Placed Near 1150 B.C.

**See Front Cover**

➤ THE DATE of the reign of the Biblical Abimelech, Israel's first king, has been fixed at around 1150 B.C.

In ruins of the temple of Shechem, ancient capital of Israel, archaeologists uncovered fragments typical of 12th century B.C. Hebrew unpainted pottery, from which they determined the date. A great sacred stone, seen on top of the wall on the cover of this week's SCIENCE NEWS LETTER, is now restored by archaeologists to the spot where it once stood in the courtyard of the temple.

Abimelech destroyed the temple during a revolution that occurred three years after he had established himself as ruler. In the remains of ancient houses built successively on the same site, pottery fragments, coins, jewelry and other objects were found.

From them the archaeologists have not only learned more about daily life in Shechem but have been able to construct an accurate dating scheme covering the important period from the time of Alexander the Great to 50 years after the death of Christ.

Scholars from Drew University, McCormick Theological Seminary, Harvard Divinity School and seven other American educational institutions probed the ruins of Shechem for three summers. It is the largest American archaeological project in the Holy Land.

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GENERAL SCIENCE

## Value of Scientific Papers Measured

➤ HOW TO MEASURE the importance of a scientific paper will be investigated during the coming year by a team of scientists at the Case Institute of Technology in Cleveland.

The project is part of an attempt to solve a major problem confronting American science, that of improving the spread of scientific information in order to speed research.

The scientists will analyze articles published in various scientific fields since 1900, and try to identify the distinguishing characteristics of a quality article. In the past, Case scientists have demonstrated that chemists spend much more time communicating than they do in research in the laboratory.

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