

ANTHROPOLOGY

Pollen Shows Climate

Pollen found with Neanderthal man in Shanidar cave shows that the climate changed from cold to sub-tropical over a period of 15,000 years, Tove Neville reports.

➤ **POLLEN OF DATE** palms and fir trees are giving new clues to the climate in which primitive Neanderthal man lived.

Dr. Ralph S. Solecki of Columbia University told the American Anthropological Association meeting in Philadelphia that warm and cold weather alternated when Neanderthal man lived in Shanidar cave, Iraq.

Pollen of fir trees found with Shanidar man revealed that he lived in a cold climate about 60,000 years ago. Date palm pollen found with other Shanidar remains indicates that the Neanderthal population, living about 45,000 years ago, enjoyed much warmer weather.

Dr. Solecki, who worked on the excavations in Iraq, said one individual living during this time had had an arm amputated and was also probably blind.

The Shanidar man of 50,000 years ago, living in a cool climate, also met with a sad fate. He had been wounded by a spear thrust in his chest, and the wound had healed only about a week when the roof of the cave fell in and killed him.

Neanderthal man was a hunter who probably clothed himself in skins during the cool periods. The remains of a child dated at 70,000 years ago is the oldest known evidence of the Shanidar people, Dr.

Solecki said. No pollen clues to the climate at that time were found with the child.

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Mixed Human Population

➤ **A HUMAN POPULATION** made up of a mixture of many different types has tended to increase the lifespan and fertility in man over the ages.

This is the conclusion of Dr. Lawrence Angel of Jefferson Medical College, Philadelphia, who has studied groups of men from about 10,000 B.C. to modern times.

Dr. Angel told SCIENCE SERVICE that he compared studies of Stone Age man in North Africa, the remains of men from Greece and Cyprus and modern man from Peru and Melanesia. He found by studying body and head shapes that differences in persons within a group in early human populations was higher than once believed.

He said he had expected isolated groups would be similar in body build and head shape because of intermarriage. If some groups did inbreed they did not survive, because great variety was found within groups.

Surviving groups must have found ways to pick mates from other groups, account-

ing for the physical differences from person to person, he reported to the American Anthropological Association meeting in Philadelphia.

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Evolution in Blood Seen

➤ **NEW EVIDENCE** indicates that hemoglobin has changed continuously during the course of evolution to accommodate the increasingly complex brain, culminating in man.

This at least seems to be true from studies made on primates by Dr. John Buettner-Janusch of Yale University. He told the American Anthropological Association meeting in Philadelphia that hemoglobin of prosimians, such as lemurs, gives up oxygen faster than the hemoglobin of anthropoidea, such as monkeys, apes and man.

This quick oxygen expulsion may be important for many prosimians that live unusually active lives in tree tops. They need to have a source of oxygen available in moments of stress as they "fly" through the trees.

The hemoglobin of anthropoidea carries more oxygen that is given off more slowly to accommodate the more complex brain, experiments so far indicate, Dr. Buettner-Janusch said.

Hemoglobin is the chemical that gives blood its red color.

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Incest Taboos Are Social

➤ **THE BELIEF** that the reason for the existence of incest taboos was to protect the human race from genetic consequences of marriage of close biological relatives is nonsense, eminent anthropologist Margaret Mead reported. She said there is no biological evidence to support this.

Dr. Mead, associate curator of the American Museum of Natural History in New York City, told SCIENCE SERVICE that incest taboos are social products created by society to protect the household.

Therefore it is a mistake to consider only blood relations as being incestuous, as is commonly done in Western civilization. She said incest taboos must be re-examined to include foster children, foster brothers and sisters as well as blood relations.

This is practiced to some extent by Roman Catholics who see an impediment to marriage between persons reared in the same family.

Incest taboos vary from one society to another and from time to time. It is necessary to re-examine these taboos continuously, Dr. Mead said.

She spoke at a session on sex and culture at the annual meeting of the American Anthropological Association in Philadelphia.

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Negroes Not Inferior

➤ **THE AMERICAN** Anthropological Association repudiated statements now appear-



COMET SEKI—Expected to vie with Halley's comet in brightness, Comet Seki has been observed as only fifth magnitude. Dr. Elizabeth Roemer of U. S. Naval Observatory, Flagstaff, Ariz., photographed Seki when it had a tail several degrees long. (See stories SNL, 80:304, Nov. 4, 1961, and 80:351, Nov. 25, 1961.)

—ASTRONOMY—
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ing in the United States that Negroes are biologically and in innate mental ability inferior to whites.

The group also reaffirmed that there is no scientifically established evidence to justify the exclusion of any race from the rights guaranteed by the Constitution of the United States.

The basic principles of equality of opportunity and equality before the law are compatible with all that is known about human biology. All races possess ability needed to fully participate in the democratic way of life and in modern technological civilizations.

This resolution was adopted by the Fellows of the American Anthropological Association at the annual meeting in Philadelphia.

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True Picture of Incas

➤ AN ETHNOLOGIST is trying to put archaeologists to work digging up the real truth about the mysterious Incas.

This he proposes to do by showing archaeologists exactly where to dig, using descriptions of local Inca sites written by Spaniards shortly after they arrived in the New World.

Dr. John V. Murra of Vassar College, Poughkeepsie, N. Y., appealed to archaeologists at the American Anthropological Association in Philadelphia to go out and dig up the people behind the potsherds, not just the pots, and fit these to historical accounts. He said the history of the Incas has previously been written from the top down, namely from often exaggerated descriptions of their supposed gold and utopian state, or their "wicked" religion.

It is necessary to "dig" from the bottom up, from exact local descriptions of the village, its houses and temples, to find the real truth about how Incas lived and who they were.

Dr. Murra has such a blueprint for the truth in a manuscript containing a report written by Inigo Oitiz de Zuniga, after an inspection trip he made to a village in 1562, a short 30 years after the Spaniards landed.

In his report Oitiz gave an exact description of every house, temple and hut.

The archaeologists digging out a temple will know ahead of time if a building was a state temple or a local shrine. No guesswork or uncertainty, generally the great headache of digging up the past, will be involved because the report tells clearly the use of each building.

The class differences in the village, which has the same name today it did in 1562, are also found through the document and are just waiting to be verified archaeologically. The report states the chief had several wives, whereas ordinary workers had only one. Excavating the ancient houses will show whether the living quarters provided for one wife in most cases and many for the chief.

The location of the craftsmen's houses can be found from the report, and a comparison between these and the chief's house or others in the village can be made, he said.

Using the report, it may also be possible

to verify whether the so-called Decimal System, having one chief over a thousand households and another over ten thousand households, etc., was an administrative system or, as Dr. Murra believes, a census system merely to keep track of the people.

Archaeologists can also find the Inca market places and learn what kind of trade took place as well as from how far away the Incas came to trade.

This again would give clues to the Mitmaq, or colonists, that came in to trade and show how these differed from the village people. Colonists were often sent out by the Incas to cultivate crops such as coca or pepper, or keep herds at a higher or lower altitude than that of the village. The Incas lived in a vertical world, not on a horizontal plain such as most humans do, Dr. Murra said. The mountains are so steep that the lowest level of living was at 9,000 feet.

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