CLIMATOLOGY

Climatic Change Puzzle

Variations in amount of heat received from sun due to wobbling in earth's motion are "real," but alone do not account for Ice Ages, new orbital calculations show.

➤ HOW WOBBLING of the earth's motion around the sun changes our climate over thousands of years is a puzzle scientists are still trying to solve.

New calculations on changes in the earth's orbit for the last 1,000,000 years have just been revealed by Drs. Dirk Brouwer and A. J. J. van Woerkom of the Yale University Observatory, New Haven, Conn. They show variations in the amount of heat received from the sun that are "real and must have affected climatic conditions."

Yet the same new figures also show that the changes in the earth's orbit alone cannot account for the Ice Ages, recently fairly accurately dated by the radioactive carbon calendar.

The puzzle is not a new one for scientists. The theory that changes in the earth's motion around the sun can account for the Ice Ages was originally proposed in 1875 by the Scottish scientist James Croll. Later it was modified by the Yugoslav astronomer, Milankovitch, and the Yale astronomers now have again examined the problem.

For latitudes such as the United States, the amount of heat received from the sun in the summer season varies with a period of 21,000 years, their new calculations show. During this cycle, the date of the earth's closest approach to the sun, now early in January, runs through the year. Lake deposits found in the western United States have a similar 21,000-year cycle.

For higher latitudes, the main variation in heat received from the sun is due to changes in obliquity, which is the tilt of the earth's equator to the plane of the earth's orbit. Small changes in the obliquity can cause "significant changes in the amount of heat received by the earth," the scientists state.

At a latitude of 65 degrees north, about on a line with Nome, Alaska, changes can amount to as much as a two and a half percent difference in the amount of heat received for the summer half of the year. Four sharp dips were found during the last 300,000 years, and these were thought to be related by those who favored the Milankovitch theory to the times of advances of great glacial ice sheets. The dips occurred at about the same time in the northern and southern hemispheres, but are not close enough to the actual dates to account for the Ice Ages.

It is known that there have been a number of separate glacial advances, which geologists generally divide into only four or five periods. These ice advances have been separated by long interglacial stages with relatively warmer climates. It is believed that we are now living in the closing stage of a glacial period.

Science News Letter, June 7, 1952

PSYCHOLOGY

Popular Grandmas Must Be Helpful Around Home

➤ GRANDMA, IF she wants to make a hit with her college student granddaughters, must keep up with world affairs, but she must also be helpful around the home. She must remember her grandchildren with special little attentions, but must be independent and not all wrapped up in the children.

What young girls like and dislike about their grandmothers was revealed to Dr. Ruth Staples, psychologist of the University of Nebraska, Lincoln, Neb., when she questioned 107 college women.

The greatest number, 46.7%, mentioned liking a grandmother who is considerate of others. A total of 44.9% liked her for making and doing special things and the same proportion mentioned that she adjusts to changes in customs and ideas; almost as many appreciate her enjoying the grandchildren's interests and accomplishments.

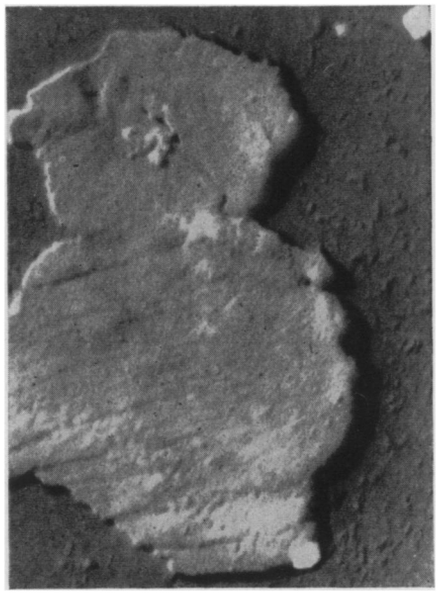
Leading cause of dislike is her interference with or criticism of parental discipline. Almost as unpopular is a tendency to nag and boss.

In spite of their pleasure in thoughtful gifts from grandma, the girls do not like to feel that grandmother is using the gift to bid for affection. They do not like the grandmother who is snoopy or prying or who tries to run everything.

They appreciate the grandmother to whom they can go for wise guidance and understanding; they do not want her to try to appear younger than she is.

Details of the study are reported to the American Home Economics Association in the JOURNAL OF HOME ECONOMICS (May).

Science News Letter, June 7, 1952



DIRECT POSITIVE IMAGE— A shadowed electron micrograph, printed directly on reversing photographic paper, shows the platelets of carbide, or cementite, that have been extracted from steel, magnified 40,000 times. The replica surface is the reverse of the steel surface, the depressions being actually projections on the original specimen.

MEDICINE

Isoniazid New Name For New Anti-TB Drug

➤ THAT NEW anti-TB drug you have been reading about has been called by six or seven different names. The World Health Organization has decided to end the confusion, if possible, by establishing one common, non-proprietary name for use the world over.

Isoniazid is the name WHO has picked, the office of the U. S. Pharmacopoeia, New York, has announced.

Chemical names for the drug are isonicotinic acid hydrazide and isonicotinyl hydrazide. Some doctors have shortened these to INAH and INH. Trade names for the drug are Nydrazid (Squibb) and Rimifon (Hoffmann-LaRoche).

Science News Letter, June 7, 1952

METEOROLOGY

Hurricane Watch Begins June 16 in Caribbean

➤ PLANS HAVE been completed for this season's hurricane watch and it will go into effect June 16. The hurricane watch is a joint project of the U. S. Navy, Air Force and Weather Bureau.

Average date for the first hurricane of the season is about the end of July. Last year, however, a new record was set when a hurricane developed east of Florida on May 16. None had started so early since records have been kept.

Officials assure that, if a hurricane develops before June 16, the planes and radar necessary to track it can be mobilized and