

of Mars itself, before the light left on its long trip earthward. But of this the astronomers reported they could find "no evidence whatever."

Astronomy and botany are expected to cooperate in finding out the age of certain undated wooden statues of saints in Southwestern churches. These "santos," carved by Indian artisans in gratitude for petitions granted, are of all ages from early mission days to very recent, but they have been neglected by archaeologists, and nobody has any idea of how old the various types are.

Dating Sample "Santos"

Here is where "astrobotany" comes in. Dr. A. E. Douglass, noted for his studies on the age of prehistoric pueblos by comparison of tree-ring patterns in their timbers, is to be consulted on the tree-ring patterns in the wooden "santos" themselves. Over most of their bodies there are concealing layers of paint, but the flat bases on which they stand offer excellent points for examination.

After tree-ring chronology has established the ages of a few good sample "santos," resemblances in style of workmanship and conventions of religious symbolism will help to get the rest properly classified. The program for this study in recent archaeology of the Southwest was presented by Curator Mitchell A. Wilder of the Taylor Museum for Southwestern Studies at Colorado Springs.

2,000 "Sky Dogs"

New stratosphere records will be sought in an entirely new kind of stratosphere balloon, Jean Piccard, twin brother of strato-pioneer Auguste Piccard, announced. Mr. Piccard will undertake the long ascension under the lift not of a single giant balloon as heretofore used, but with a "sky dog team" of 2,000 small rubber pilot balloons.

"Since a single sounding balloon is able to carry a half-pound instrument to an altitude of twenty miles it is obvious that 2,000 sounding balloons could lift an air-tight gondola weighing 1,000 pounds to the same lofty position," he said. "It is my intention to construct such an assembly and to make scientific observations at the altitudes reached by sounding balloons."

"Before making such a flight I intend to test the possibilities of the composite balloon by making, in the near future, an experimental flight with eighty sounding balloons attached to an open gondola."

Science News Letter, July 3, 1937



FOLK STILL MARVEL AT METEORITES

America now has a special society for the study of meteorites, which took an active part in the Denver meeting of the American Association for the Advancement of Science. But interest in these "thunder-stones" is much older than that; as witness this woodcut from an ancient German book, telling of the first one actually seen to fall, and collected afterwards. It plunged to earth on Nov. 16, 1492, near Ensisheim, Alsace. The Field Museum of Natural History has a piece of this meteorite.

GENERAL SCIENCE

Publishing Scholarly Data Is Vital World Problem

MILLIONS upon millions of words flow from the world's printing presses day by day.

In the face of this daily flood of the written word it may seem unnecessary to plead for and provide more and easier publication. Nevertheless to the scientific and scholarly world getting the findings of researches into the thought stream of civilization is a pressing problem.

The details of cosmic ray observations, the cryptic derivations of mathematical formulae, the intricacies of chemical determinations, the delving of a scholar of language into a tongue long dead, the columns of statistics compiled to chart the course of population—these data are of little interest to most of us although they are important to all of us. To publish such material in large editions is not necessary, but to have it available to those experts who need to use it is essential. Now, next year, or within a decade or so, a dozen or a few hundred scholars and experts will want this information.

A combination of photography and the microscope promises to make it possible to supply upon demand such records to the specialists. Upon strips of motion picture film are photographed the typed

sheets, illustrations, and drawings of the research reports. An ordinary page shrinks to a mere inch in height. This "microfilm" costs about a cent a page and the scholar reads it with a projection or magnifying device.

Such a system of auxiliary publication for scholarly material is being operated by the newly organized American Documentation Institute. And by a similar process the rich and voluminous literature of the past in libraries is being made available.

Science News Letter, July 3, 1937

PHYSIOLOGY

Golfer's Energy Expenditure Would Warm Ton of Water

A GOLFER who plays 18 holes on a warm day gives off enough heat to raise the temperature of a ton of water one degree. He loses enough water through perspiration to fill two water glasses. These estimates, by A. H. Reinach, industrial expert on water and beverage cooling equipment, are cited as good reason why golfers enjoy a cool drink at the "nineteenth hole."

Science News Letter, July 3, 1937