



ANCIENT CEREMONIAL ROOM—The kiva of the prehistoric Sinagua Indians of Arizona is the first ceremonial room found in this culture, and may relate it to the later Hopi Indians. The room was excavated by University of Illinois archaeologists working in cooperation with the University of Northern Arizona.

ARCHAEOLOGY

Indians Before Hopis

➤ A LINK between the ancient people known to archaeologists as the Sinagua people and the later Hopi Indians has been found by an archaeological party digging under the direction of Prof. John C. McGregor of the University of Illinois. They have been searching the remains of a village 600 to 700 years old some 50 miles southeast of Flagstaff, Ariz.

Among the seven rooms they have explored in this 40-room village they found a very unusual ceremonial room, or kiva, which, Prof. McGregor said, had many characteristics like those of the Hopi people's kivas. Most kivas found in the Southwest are circular, but the Hopi used a ceremonial room very different in shape—it was rectangular.

The rich culture of the Sinagua people, Prof. McGregor indicates, may have been due to an accident of nature. An eruption 1,000 years ago of the volcano now known as Sunset Crater spread ashes several inches deep over a 45-mile territory. This made the soil so fertile that the corn-growing Indians of the region had new leisure to develop their arts. Among their materials are beautiful pottery and exquisite jade mosaic work.

More than 6,000 pieces of pottery were collected by the expedition this summer. They also uncovered the bones of an infant

and of a young person, each buried with three ancient pots, and of an adult buried with seven pots, four copper bells, four large shell bracelets and many other items.

Science News Letter, August 22, 1953

ENTOMOLOGY

Hummingbird Moth Flies During Day

See Front Cover

➤ AN EXCEPTION to the rule that moths usually fly at night and are inactive during the day is the clearwing thysbe, or hummingbird moth, shown on the cover of this week's SCIENCE NEWS LETTER.

Frequently this moth, *Hemaris*, is mistaken for a hummingbird because of its darting flight and its habit of remaining poised at a flower while feeding. The hummingbird moth is readily identified by its yellowish-green color and the band of brown around its body.

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The whirring of an electrically operated silo unloader is the only sound needed to call cows to dinner on a New York farm; the machine unloads ensilage on a conveyor belt that carries the food to the animals.

AVIATION MEDICINE

Lack of Gravity No Space Flight Hazard

➤ AT LEAST twice U.S. Air Force experimenters have produced a no-gravity situation for jet pilots.

Although test results are inconclusive, they indicate that a lack of gravity will not severely harm the mind or body of the interplanetary man of tomorrow, the astronaut.

Dr. Siegfried J. Gerathwohl of the Air Force School of Aviation Medicine at Randolph Field, Tex., reported to the Fourth International Astronautical Congress meeting in Zurich that no ill effects of any consequence were noted after the tests were ended.

Two groups of flights were made: one by Test Pilot Burt Crossfield at Edwards Air Force Base, Calif., for the National Advisory Committee for Aeronautics; the other by personnel of the Aero Medical Laboratory at Wright-Patterson AFB, Ohio.

A weightless state was maintained up to 42 seconds as the planes swished through the sky, following a carefully worked out path. Mr. Crossfield said he noted a sensation of "befuddlement" during the first no-gravity flights of the group, but this later was overcome.

This weightless state may still be a serious problem, Dr. Gerathwohl reported. However, human reaction to it was entirely different from the reaction of mice sent up in rockets last year by Dr. James P. Henry and a group of associates from the Aero Medical Laboratory. (See SNL, Oct. 11, 1952, p. 230.)

The mice definitely were disturbed by the absence of gravity. Some clung to the floor of their cage, others reached out desperately to find some support. Dr. Gerathwohl predicted space passengers might react in the same way.

More experimental flights must be run under carefully controlled conditions before physicians and psychologists can determine precisely what physical and psychological reactions occur in the human body when gravity is removed.

Science News Letter, August 22, 1953

A bird's eye has a third eyelid which keeps the eye moist; it also doubles as a light filter.

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