



TWIN TO AUTOGIRO

This is the gyroplane, which is very similar to the better known autogiro in both appearance and behavior. Intensive research on this type of aircraft is being conducted by the National Advisory Committee for Aeronautics at its Langley Field laboratories. The autogiro has already been given considerable attention by the N. A. C. A.

## ARCHAEOLOGY

## Man Made Tools in Dim Age "At Present Unspecified"

J. REID MOIR, British archaeological pioneer who has worked tirelessly to unearth the dawn age of man's life on earth, has sprung a new surprise.

Twenty-five years ago Mr. Moir startled conservative scientists by showing some queer-shaped flints he had dug up near his home in Suffolk, southeast England. He called these stone objects the handiwork of men living in the Pliocene period of world history. If true, that would mean that man was using his hands and brain intelligently, to make tools, earlier than had been demonstrated.

Gradually, scientific incredulity changed to scientific cooperation. Mr. Moir's flint objects, which he continued to unearth in East Anglia, have been widely accepted as works of man. Examples of these old, old stone implements are among the exhibits of early man in the American Museum of Natural History in New York, the Field Museum in Chicago, and the British Museum in London.

So, Mr. Moir has proceeded to the next stage in his task, and doubtless to a new controversy. He attempted to sort out these very ancient relics of man in England, with a view to learning more definitely how old they are.

In a report to *Nature*, he now announces "certain unexpected and far-reaching conclusions."

The scientific bombshell is that among these rows of flint pieces, which would have little to distinguish them in the eye of a layman, Mr. Moir sorts out "four distinct and different groups of implements."

What of it? Simply that the progress from one to another of those four kinds of stone tools may be measured in tens, perhaps hundreds, of thousands of years. The men who made the four kinds represent possibly several hundred thousand years of man's history and "progress."

The age ends in the Late Pliocene which is a time variously estimated to be several hundred thousand to a million years ago. But it is the beginnings that are more dramatic. Mr. Moir assigns one well-made curved implement, of the kind called an "eagle-beak," to an age older than the Lower Pliocene stratum of the site. And this eagle-beak is still not so old as the implements Mr. Moir considers the earliest.

There, Mr. Moir leaves his problem, having pushed his old weapon-makers back into an age which he calls "at present unspecified."

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## VETERINARY MEDICINE

## Water Snakes in Zoo Had Amebic Dysentery Epidemic

DURING the past summer and fall, while the medical profession and public health officials were much disturbed by the outbreak of amebic dysentery among visitors to the Chicago fair, the water snakes and other reptiles in the Philadelphia Zoological Garden were suffering from a similar ailment.

In describing this condition of snakes in *Science*, Dr. Herbert L. Ratcliffe and Quentin M. Geiman of the University of Pennsylvania and the Laboratory of Comparative Pathology of the Zoological Society of Philadelphia state that although reptiles have long been known to be parasitized by amebae similar to those which cause dysentery in man, these protozoa have not been recognized heretofore as causing disease.

The infection in the water snakes amounted to an epidemic but there were isolated cases among other reptilian species also. The source of infection has not been determined. So far, no symptoms of the disease have been noted and infections have not been recognized until after death. As in amebic dysentery of man, disease changes consisted of ulcers in the large intestine and abscesses in the liver. In two instances, however, the amebae also caused gastric ulcers, which of course is not true in man.

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## GEOGRAPHY

## Huge Photographic Map of Indian Lands to be Made

A HUGE airplane photographic map, 40 by 24 feet, of the Navajo and Zuni Indian lands in New Mexico, Arizona and Utah, has been contracted for by the Department of the Interior. It is to be used as a basis for the better regulation of grazing practices, which have already gone to severely damaging excess in many small and a few large areas.

Airplanes making the photographs will fly at an altitude of over 20,000 feet, taking more than 4,500 individual photographs with a special four-lens camera. The separate pictures will be fitted together into a single mosaic map.

Total cost of the work will be about \$77,000; but if the work were done by ground parties it would cost more than \$500,000.

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