

## ANTHROPOLOGY-ARCHAEOLOGY

# World's First Murderers?

**Man-apes, if they were human, may have been the world's first murderers. Caves containing remains of killed animals and crushed man-ape skulls were found.**

► WERE the world's first hunters also the first murderers?

The long-extinct walking man-apes of South Africa may have used bone clubs to kill other animals for their food, and perhaps also to crack each others' skulls. Evidence tending to show this is presented by Dr. Raymond A. Dart of Johannesburg, South Africa, in the *AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY*.

Dr. Dart and his colleague in research, Dr. Robert Broom, have long insisted that the man-apes must have walked erect, and because of this and their teeth, they should be placed on the side of man rather than the side of the apes. The scientists have been vindicated in the last two years by finding pelvic bones of two man-ape types, *Plesianthropus* and *Australopithecus*, which could only have belonged to upright animals like man.

Artifacts of culture, however, present a more difficult problem. Up to now, anthropologists have been barely willing to concede that the more advanced Java man, *Pithecanthropus*, probably had recognizable tools of stone. Nonetheless, Dr. Dart is satisfied that the *Australopithecus* who lived in the caves at Makapansgat did indeed use clubs of bone. This extension of "archaeology" to include the life habits of a creature still half an ape will give Dr. Dart's colleagues something to wrestle with.

Recognizing that his case called for a *corpus delicti*, Dr. Dart decided to make a systematic examination of the remains of various kinds of baboons found in all the caves used by the man-apes, at Makapansgat, Sterkfontein and Taungs. He sought the advice of Dr. R. H. Mackintosh, professor of forensic medicine at the University of the Witwatersrand, who has wide knowledge of skull wounds caused by lethal weapons, and with injuries to the skull and skeleton involved in other causes of death. Of some 58 baboon skulls and jaws, almost all gave evidence of breakage by heavy blows. Many were on the left side, indicating that the blow was delivered by a right-handed animal.

Some of the fractures showed peculiar paired depressions such as would fit the twin ridges found on the lower end of large leg bones of herbivorous animals, a number of which were discovered in the caves. Finally, some of the skulls indicated that pieces had been peeled or broken out of the top by hand or by a bone point in order to allow the brain to be taken out for eating.

Dr. Dart finds that these many wounds

were not due to the paws and teeth of carnivores, which might be suggested as a cause. Nor were they due to crushing by weight of rock during the time the bones lay fossilized in the cave material, for they gave clear evidence of having been made while the bone was fresh and before it had become fossilized.

Dr. Dart even finds evidence that the skulls of the several man-apes themselves were broken by the same kind of violence. If the man-apes were human, and if they killed one another with clubs, it was murder—or something very like it.

Science News Letter, June 11, 1949

## AERONAUTICS

## Foresee Higher Speed with New Engines in Stratojet

► NEW and more powerful jet engines are to be installed experimentally in a Boeing XB-47 Stratojet. These engines will give an increased thrust of 25% to the plane that has already achieved a transcontinental rec-

ord at an average speed of 607 miles an hour.

The new engines are General Electric J-47 turbojets. Each will develop more than 5,000 pounds thrust, compared with 4,000 pounds thrust of the earlier J-35 turbojets. The new engine is described as an extended development of the J-35, and has approximately the same general dimensions and shape. The Stratojet is equipped with six jet engines. The new installation will give the Stratojet a total power potential of more than 48,000 pounds of thrust, when using its six J-47 turbojets and its 18 integral aerojet jato rocket-assist units.

Science News Letter, June 11, 1949

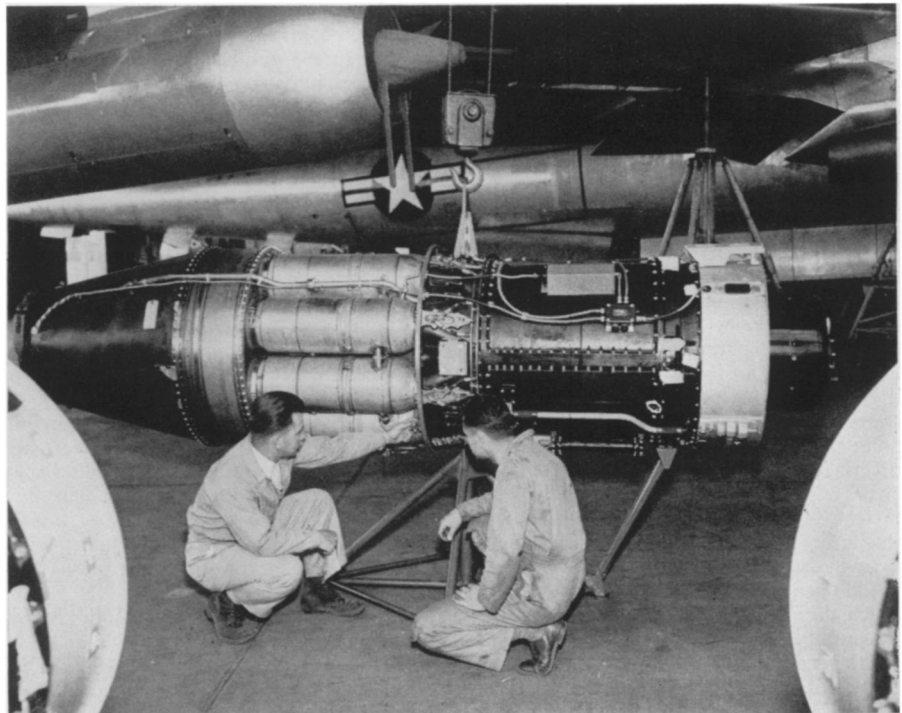
## AGRICULTURE

## Larger Tomato Yields Promised by New Method

► A NEW method for producing seed for superior tomatoes at low cost is reported by Drs. R. E. Larson and Li Peng-fi of Pennsylvania State College in the journal, *SCIENCE* (June 3).

The larger the seed, the more tomatoes per acre will be produced by plants from that seed, their experiments show. By selecting seeds according to their size, breeders of pure line tomato strains will get more vigorous plants and will be saved the cost of growing considerable undesirable material.

Science News Letter, June 11, 1949



**MORE POWER**—Six of these J-47 aircraft jet engines will replace the less powerful J-35's in one of the two experimental XB-47 Stratojets, the world's fastest bombers, and will power production models.