

## ANTHROPOLOGY

# Man's Relative Hairlessness Not Due to Wearing Clothes

**M**AN DID NOT lose the bulk of his body hair because he took to wearing clothes, or because of any other environmental change adopted by him or forced upon him. The relative hairlessness of humankind is simply the most extreme expression of a general evolutionary trend to reduce the hairy coat in all the highest primates—man and the large apes. Some of the great apes have even fewer hairs per square inch of scalp, and the gorilla at least is often not as hairy-chested as a man.

This is among the conclusions reached through a comparative study of hairiness among monkeys, apes and men, conducted by Dr. Adolph H. Schultz of the Johns Hopkins Medical School and reported to *Human Biology*.

Dr. Schultz selected areas of one square centimeter each, on head, chest and back of human beings of three different races and of many species of monkeys and apes. On each of these areas he painstakingly counted the hairs, and then multiplied the number by the total area in square centimeters, to get the total number of hairs.

Several of his results are not what might be expected from a priori assumptions. Human beings were found, for example, to have more hairs on their heads than some of the apes. The average number of scalp hairs per square centimeter was 312 for man and 307 for thirteen specimens of the large anthropoid apes. The gibbon, a small Asiatic ape, was much hairier on the head, with 2,035 hairs per square centimeter, and one monkey species, *Aotus*, had twice as many as that, with 4,083.

Gorillas are less hairy-chested than many men. Two adults had only six and three hairs, respectively, per square centimeter, whereas a man—not a very hairy-chested one at that—had nine. Two chimpanzees were also relatively bare-chested, with counts of 43 and 59; while the gibbon again showed a high count of 499.

In regard to the back, man scored an absolute blank, with zero hairs per square centimeter; the anthropoid apes averaged only 276, but the gibbons 1,727. Various lower monkeys were even more hairy-backed.

Scalp hair varies in density among

the human races, it appears. Six adult Negroes averaged 297 hairs per square centimeter, and three adult white men had a few more, with an average count of 333. But a Hawaiian showed only 216 per square centimeter, and a Chinese as few as 128.

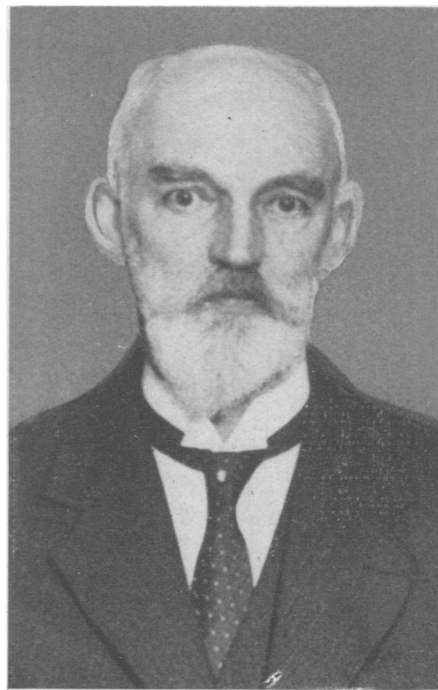
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## ASTRONOMY

## "Universe Maker" Begins Tour of American Cities

**T**HE GREAT DUTCH "universe maker," Dr. Willem de Sitter, director of the world's oldest observatory, the "Sterrewacht" at Leyden, Holland, has begun a lecturing visit to American centers of science. For four months he will travel in this country and Canada, meeting American astronomers and describing to audiences the astronomer's present conception of the universe.

Dr. de Sitter will spend some time at Mt. Wilson Observatory, Pasadena, Calif., arriving there on New Year's Day. Earlier he will lecture in New York, Philadelphia, Washington, Prince-



**DR. WILLIAM DE SITTER**  
*Director of the world's oldest astronomical observatory*

ton, New Haven, Amherst, Providence, Montreal, Toronto, Delaware (Ohio), Ann Arbor, Chicago, Evanston, Des Moines, Austin and other places.

He will deliver the famous Lowell Lectures at Boston, and the Hitchcock Lectures of the University of California.

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## INVENTION

# Ribbon Microphone Keeps Noises Out of Sound Movies

**T**HE DIRECTOR may shout and the camera grind loudly, but only the desired music and the voices of the actors will be heard in the talking movies being filmed, if the noisy director and camera are in the plane of zero reception of a new type of microphone that has been developed recently.

The pressure type of microphone now in use in recording sound pictures has practically no sense of sound direction, picking up all sounds promiscuously. The result is that objectionable noises, such as those produced by the grinding of the camera, often cause great worry and inconvenience in making a talking film. But the new instrument, known as a ribbon microphone,

has a marked directional characteristic.

The ribbon type microphone is essentially a light metallic ribbon suspended in a magnetic field and freely accessible to air vibrations from both sides. This principle was suggested some time ago but little was done with the idea until the present research developed a practical instrument. This new type of microphone has not only a sense of direction but also a plane of zero reception in which the camera and all else that might add detracting noises may be placed. It is described by Harry F. Olson, of the research division of R.C.A. Photophone, Inc., in a report to the Society of Motion Picture Engineers.

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