

ZOOLOGY

To Study Camels

► **WHAT DO** camels have that we don't? To answer this question, four scientists will move into the Sahara desert this fall and turn nomad.

In a forbidding region of sand and rock where the temperature zooms as high as 140 degrees and where years may pass without rainfall, the scientists will spend 12 months finding out how camels manage to thrive in such hostile surroundings.

The water shortage and heat stress of the desert are deadly to most animals, including man. The camel's ability to withstand these hardships has long been a puzzle to zoologists.

So, equipped with a laboratory on wheels and special paraphernalia to give the animals as thorough a medical examination as any human being would ever want, Drs. Knut and Bodil Schmidt-Nielsen of Duke University, who will head the expedition, Dr. T. Richard Houpt of the University of

Pennsylvania, and Dr. S. A. Jarnum of the University of Copenhagen, Denmark, will look for the answers to some old questions.

Some of these are: How great a water loss from its blood and tissues can the camel stand? Does the camel have any unknown way of storing water? How much does sweating help a camel keep cool?

In order to study the camel in its native surroundings and under its normal working conditions, the researchers will stay close to the tiny village of Beni Abbes, some 500 miles from Algiers.

Dr. Schmidt-Nielsen believes that more knowledge of the desert animals may lead to a better understanding of human beings' physical reactions to hot climates. Also an incentive to research is the fact that the camel is of great economic importance in technologically underdeveloped arid zones of the Old World.

Science News Letter, September 26, 1953

AERONAUTICS

Supersonic Freon Gales

► **FUTURE WIND** tunnels may unleash supersonic gales of Freon-12 upon airplane models to prove the worth of their aerodynamic designs.

The National Advisory Committee for Aeronautics reports that the colorless gas, often used as a refrigerant in air-conditioning systems, offers distinct advantages over air as "wind" in test tunnels.

Great power savings are made possible by the gas, since sound travels through Freon-12 about half as fast as it moves through air. This means the Freon-12 must be blown through the test section only about half as fast as air to produce supersonic conditions for the model.

Since the power required to operate a wind tunnel varies directly as the cube of the wind speed, it becomes highly desirable to pull the supersonic air stream down into a more economical, lower range of wind velocities.

Albert E. von Doenhoff, Albert L. Braslow and Milton A. Schwartzberg, all NACA scientists, reported that the NACA's low-turbulence pressure tunnel at Langley Field, Va., has been modified to use Freon-12 instead of air. As a result, the maximum test-section wind velocities were raised from Mach 0.4, which is four-tenths the speed of sound, to Mach 1.2.

The increase converted the tunnel from a subsonic research tool into modern supersonic facilities. The synthetic increase of air speeds furthermore required no additional power, or any change in the propeller.

However, since the gas is more easily

compressed than air, allowances must be made for this. The three scientists now report they have worked out ways of predicting the model's behavior in air once it has been studied in the Freon-12 wind tunnel.

The NACA scientists' findings may have a significant impact upon the aviation industry. Building supersonic wind tunnels is costly and time-consuming. They are expensive to operate. With modifications, however, many existing subsonic wind tunnels may be converted virtually "overnight" into supersonic facilities.

Science News Letter, September 26, 1953

PSYCHOLOGY

Report "Spanks" Youths For Auto Accident Record

► **INCAUTIOUS, YOUTHFUL** male auto drivers were given a verbal spanking for their traffic and accident records in a report prepared at Iowa State College, Ames, Iowa, by the Driving Research Laboratory.

A. R. Lauer and Donald A. Hoppe, both of the laboratory, have just completed a six-month 'round-the-clock study of highway users. Their data show "a block of wild drivers constituting about 10% of the 20-to-24-year-old group who flagrantly and dangerously violate the rules of driving safely from midnight to 4 a.m."

Drawing tentative conclusions from the study, Mr. Lauer states:

"Youthful male drivers are traveling too fast at late hours of the night for their

experience and conditions of illumination. With all the basic physical qualifications for superior driving performance, their record of accidents is entirely unwarranted. Their record does not noticeably improve until a period of five to seven years has elapsed after being licensed."

Part of a projected five-year research program, the study also has revealed that older cars are driven faster on the whole than are new cars.

"This suggests a group of less responsible drivers are found on the highways at night," Mr. Lauer states. "The reverse is true for urban traffic."

The figures also show that speed and driver-age are inversely related in light traffic and that heavy traffic "cramps the style of speed demons." A 24-hour average shows that women drivers constitute about 14% of the total highway users.

Science News Letter, September 26, 1953

PHARMACY

No Sore Tongue From Penicillin O

► **PENICILLIN O** sounds like the refrain from a song, and it might well be sung gaily by patients who have gotten sore mouths and tongues from lozenges or troches of penicillin G. Because penicillin O does not cause this kind of irritation, researchers who are sensitive to penicillin G found from tongue tests on themselves of penicillin O.

This penicillin also produces fewer other allergic reactions than penicillin G with just about the same germ-killing ability, Dr. Bruce W. Churchill reported at the American Institute of Biological Sciences in Madison, Wis.

Dr. Churchill and Drs. J. H. Ford and D. R. Colingsworth of the Upjohn Company, Kalamazoo, Mich., developed penicillin O. Chemically, it is allylmercaptomethyl penicillin. Upjohn has tradenamed it Cer-O-Cillin and it has had extensive clinical tests during the past five years.

Science News Letter, September 26, 1953

SURGERY

Stump Muscles Move Artificial Hands

► **KOREAN WAR** veterans who lost hands in service are being fitted with artificial hands that can be moved by the muscles of the man's stump.

Civilians who lose hands in industrial or traffic accidents can have the same kind of hand, Dr. Ernst W. Bergmann of New York pointed out at the meeting in New York of the U. S. and Canadian Chapters of the International College of Surgeons.

The method can also be used for short arm stumps, he said.

Science News Letter, September 26, 1953

The bodies of *cattle* contain more than 26 different mineral elements.