

AVIATION

Wright Flyer Replica Presented to Museum

➤ A GROUP of aerospace scientists and engineers have built an exact reproduction of the original Wright airplane and presented it to the Wright Memorial Museum at Kitty Hawk, N. C., on the 60th anniversary of man's first powered flight.

The full-size cloth and wood biplane, called Project '60, was presented to the National Park Service by Dr. William Pickering, director of the Jet Propulsion Laboratory and president of the national capital section of the American Institute of Aeronautics and Astronautics.

The flyer will be the third Wright biplane on display. A replica, on exhibit at the Smithsonian Institution, was rebuilt by the Wright brothers in 1918. The second, a reproduction built from the Wright brothers' plans, is on display at the Western Headquarters of the American Institute of Aeronautics and Astronautics in Los Angeles.

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BIOCHEMISTRY

New Drug Lowers Fats in Blood Stream

➤ A NEW DRUG to lower fats in the blood stream, already available in England, soon will be ready for consideration by the U.S. Food and Drug Administration for use in this country.

Atromid S is the name of the new drug, which is particularly successful in its effect on fatty acids called triglycerides. At the Imperial Chemical Industries, Ltd., London, the new drug, also called clofibrate, is produced for retail use. The same drug is being tested at the Ayerst Laboratories in New York.

Atromid S was given experimentally with the male hormone, androsterone, it was reported in the *Journal of the American Medical Association*, 187:37, 1964.

Although cholesterol has been blamed for clogging arteries and causing coronary heart disease, triglycerides are the principal form of fat we eat. An average person may eat 100 grams of triglycerides a day, but, by comparison, only half a gram of cholesterol. What is important is how much cholesterol or fatty acids are synthesized in the body, and how much go into blocking or hardening arteries.

Recent research has pointed more and more to other fats besides cholesterol as being responsible for clogged arteries. Drs. Maurice M. Best and Charles H. Duncan of the University of Louisville (Ky.) School of Medicine said in the *Journal of the American Medical Association*:

"Future studies should resolve the question of whether elevated levels of cholesterol or triglycerides best correlate with ischemic heart disease." In ischemic heart disease a lack of blood supply to the heart muscle occurs because the artery that supplies it shuts down.

If future studies prove that elevated serum triglycerides cause atherosclerosis, or hardening of the arteries, these researchers be-

lieve that Clofibrate, or Atromid S, used with androsterone may be useful in lowering the excess fats.

Their study of various drugs used in lowering cholesterol in the blood showed the new drug resulted in more striking reduction of triglycerides than of cholesterol.

One of the other drugs tested was sitosterol, or Cytellin, produced by Eli Lilly & Co., Indianapolis. Although highly successful in reducing cholesterol, it had little effect on triglycerides.

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ORNITHOLOGY

Preen Others' Feathers For Better Relations

➤ CLEANING and arranging a neighbor's feathers not only helps friendly relations, but also serves to reduce aggression if the neighbor is a stranger.

At least, that's the way it is with birds.

Allopreening, the habit of grooming another bird's feathers, especially on the head, is characteristic of many gregarious species of birds.

Recent studies with a red finch show that the amount of allopreening does not vary with the amount of dirt, Dr. J. H. Sparks reported in *Nature*, 200:281, 1963.

This preening is a common activity among certain birds, which seem to possess an innate response to feathers as some animals to fur, Dr. Sparks of the University of London reported.

When two strange finches approach each other, any aggressive behavior is reduced by preening each other, Dr. Sparks said. If the birds are familiar with each other, the mutual nibbling and arranging of feathers serves to strengthen this friendliness.

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METEOROLOGY

Rocket Seen as Cause Of Mystery Cloud

➤ THE MYSTERIOUS RING CLOUD that startled Arizona residents last Feb. 28 was due to a Titan II rocket tested at 2:15 p.m. that day, a team of scientists has decided.

After the cloud was sighted and photographed, meteorologists disagreed concerning its cause. It was about 26 miles above the earth's surface, much too high for an ordinary type of cloud.

However, that altitude is also much too low for noctilucent clouds, which are usually found at about 50 miles. Noctilucent clouds are faintly luminous, fast-moving clouds that can be observed at twilight only during short periods in late summer and at high latitudes.

The mystery ring cloud as well as two other higher clouds were definitely due to rockets, Drs. A. B. and Carolyn P. Meinel of the University of Arizona's Steward Observatory in Tucson reported in *Science*, 143:38, 1964. They said the three clouds were not naturally occurring, but result from rockets launched from the Pacific Missile Range.

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IN SCIEN

MEDICINE

New Flu Vaccines Seen More Effective, Cheaper

➤ THE FEVER and sore arm some people get after influenza shots have been reduced in preliminary tests on two new vaccines, Dr. Fred M. Davenport of the University of Michigan School of Public Health reported. More effective and less expensive protection against flu are seen in these new vaccines.

One of them, which has an oil base, is already licensed for sale in Great Britain. It will do away with the need for annual revaccination, Dr. Davenport said. More than ten years' experience with the vaccine indicates it gives a high antibody level with protection that lasts at least eight to nine years after a single dose.

The other new vaccine, which is water-based, is composed of chemically purified viral fragments. Preliminary testing shows this type of vaccine also produces excellent antibody levels and abolishes the fever that often develops after shots. It is expected to be available soon.

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PSYCHOLOGY

TV Does Not Harm Eyes But Reduces Sympathy

➤ WATCHING TELEVISION does not hurt children's eyes or school marks, a Stanford University child psychologist reported, but it can cause them to lose some of their natural sympathy for people in trouble.

Dr. Eleanor Maccoby's findings are based on studies she has surveyed in recent years.

She suggested that citizens take some responsibility for standards of television, as they do for other aspects of their children's environment.

TV exerts its greatest influence on children when they are unfamiliar with the subjects they are watching, she said. If the children already have acquired knowledge and moral values about subjects, the influence is less. The loss of sympathy for people in trouble comes to children who habitually watch crime programs, she added.

Seeing aggressive episodes on TV arouses aggressive feelings in children, who carry out the same action if faced with similar conditions later.

On the positive side, Dr. Maccoby says when children see a classic story or play on television, libraries are overrun with requests for copies of the original.

Pre-school children who have access to TV have a head start in vocabulary, but youngsters who do not watch much TV catch up.

Dr. Maccoby reported her findings in "The Science of Human Communications" (Basic Books, 158 pp., \$4.50).

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CE FIELDS

ARCHAEOLOGY

Desert Indians Used Mesquite in Many Ways

► **THE TOUGH**, thorny mesquite tree, which has little use today, was once used by Southwest desert Indians for food, shelter, clothing, fuel, weapons and as an indicator of water.

The many uses of the mesquite by the Cahuilla Indians is described by Lowell J. Bean and Katherine Saubel in the 1962-63 annual report of the University of California at Los Angeles' Archaeological Survey.

The mesquite bean was a primary food source of the desert Cahuilla. It also was an important food source for the Pima and Yuma Indians in desert areas to the east.

The bean was eaten directly after being picked from the tree, ripened and tree-dried. Or it was ground into meal and made into cakes or mush. The meal and cakes could be stored for a year. Beverages also were made from the beans.

Mesquite bark was pounded, rubbed and pulled to form a sort of fiber. From the fiber, skirts and baby diapers were made.

Larger mesquite limbs were used as posts for dwellings and granaries. Leaves were used for roofing, and mesquite groves provided shaded working areas. As a firewood, mesquite ranked among the best, providing a hot fire for cooking, warmth and pottery baking.

From smaller limbs bows and arrows were made. Mesquite gum was used as an adhesive for fastening the arrowhead to the shaft and in construction of baskets. In dilute form it became a medicine used as an eyewash or for treating open wounds. Even the thorns were used in a tattooing process.

Since the mesquite occupied soils well supplied with water at depths probably less than 50 feet, it served to indicate where ground water lay.

Clearly defined food-gathering areas for various Indian clans existed. Mesquite thickets were identified by special marks of the clans. An encroachment by neighboring clans often led to war.

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PSYCHOLOGY

Lonely Chicks Befriend Cardboard Boxes

► **CHICKS** raised abnormally have been found to prefer the companionship of cardboard boxes over fellow chicks.

Scientists have found that newly-hatched birds do not innately recognize their own kind as such, but instead are attracted to a wide range of stimulus objects, depending on their earliest experiences.

This imprinting normally is given by the parents. However, when the parents and other chickens are not around after birth,

chicks can be exposed to inanimate objects and in time prefer the objects to some of their own kind.

Two British psychologists reared some newborn chicks in pairs and others were reared with cardboard boxes having rotating arms. Later the chicks were placed in a central compartment with a cardboard box behind one end and another chick behind the other end.

The majority of the birds migrated to their earliest remembered companion—either the box or the chick, K. F. Taylor and W. Sluckin of the University of Leicester, reported in *Nature*, 201:108, 1964.

Many of them tried to break through the mesh screen separating them from their "friend." The experiment indicated that experience rather than instinct causes chicks to flock together while young.

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AVIATION

Device Keeps Distant Airplanes on the Map

► **AN AIRPLANE** can travel an unlimited distance in any direction without "going off the map" using a navigation system developed in London.

The system, called "Cinemap," projects microfilm maps on a small circular screen. Manufactured by the Decca Navigator Company of London, it stores the equivalent of 560 square feet of map, covering an area about 3,000 miles by 2,000 miles.

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PSYCHOLOGY

Stress and Strain Causes Loss of Mouse Litters

► **HAVING THE JITTERS** makes mice lose their litters, psychological studies on newly pregnant mice show.

Shortly after mating, the mice were subjected to severe stresses and strains.

Every day, they were tossed into a swimming pool, placed in a lighted box while a loud noise sounded at odd moments, and were put in a brightly lighted white circular field.

These were "more extreme" stress conditions than are generally used in this type of experiment, researchers Morton C. Weir and J. C. DeFries of the University of Illinois admitted.

The treatment ended after 24 days when all the mice had lost their litters. Mice left alone after mating bore normal litters.

However, the stress and strain treatment did not permanently keep the mice from having litters. By 11 days after their ordeal, the group had conceived more litters than the mice that had not been given the treatment.

Apparently the treatment changed the bodily states of the mice in such a way that pregnancy became more likely than before, the researchers said.

Forty male and female mice of two highly inbred strains were used in the study, which was reported in *Psychological Reports*, 13:365, 1963.

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MEDICINE

Cooley's Anemia Can Cause Heart Disease

► **WHEN CHILDREN** with the fatal blood deficiency disease called Cooley's anemia are kept alive past the age of 20 by blood transfusions, they are likely to get heart disease.

Acute pericarditis is one of these heart complications, Dr. Mary A. Engle of New York Hospital-Cornell Medical Center, told the meeting of the New York Academy of Sciences and Cooley's Anemia Blood and Research Foundation for Children, Inc., Brooklyn. This affliction is a severe inflammation of the outer heart muscle.

Another complication, Dr. Engle said in New York, may be heart block and cardiac failure, a condition that "usually ends in death within a few months." Hemoglobin pigments and iron deposits are found in the heart muscle of all heart patients with Cooley's, or Mediterranean, anemia.

Another speaker, Dr. H. Keberle of Ciba Limited, Basle, Switzerland, reported an "exciting new therapeutic tool." Injections of a crystalline compound, from the same mold that yields the drug Actinomycin, is capable of binding iron molecules and has few side effects.

The compound, called desferrioxamine (D.F.O.) when injected, circulates through the body and combines with iron in the excessive iron deposits. Later, the iron-rich molecules are excreted through the kidneys.

Dr. Harold Fink of the Coney Island Hospital, Brooklyn, who is chairman of the conference, told *SCIENCE SERVICE* that there are probably 30,000 current cases of Cooley's anemia in this country alone. Many go unrecognized and consequently untreated.

Although called Mediterranean anemia, the disease is found in North Africa, Southwestern Asia and Iran and in the Po River Delta of Italy. It is found most often in Greece and Italy, with ten percent of the children affected in many areas of these countries.

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GENERAL SCIENCE

Plans for Atmospheric Laboratory Announced

► **ARCHITECTURAL PLANS** for the permanent laboratory of the National Center for Atmospheric Research (NCAR) have been completed.

Construction of the first increment of the complex will begin this coming spring, and be ready for occupancy approximately 18 months thereafter, Dr. Walter Orr Roberts, director of the center, announced in Boulder.

The laboratory buildings, designed by I. M. Pei and Associates of New York City, will be located on a mesa on a 538-acre Table Mountain site southwest of Boulder. The area is some 600 feet higher than the center of Boulder. The tract was given to the National Science Foundation by the State of Colorado. The buildings will be built with funds provided by NSF.

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