Guinea pigs learned to have asthma attacks even when the substance to which they are allergic is not present; they could also "forget" it.

The love of a baby for his mother was found in work with monkeys to be based more on the comfort of contact than on the fact that the mother gives him food.

Continuous mothering is not essential for a child to develop a healthy relationship with his parents, research in the Kibbutzim of Israel showed.

An infant born without a forebrain lived for three months and behaved much as would any normal newborn.

Study of a girl who is colorblind in only one eye added to knowledge of certain abnormal perceptions of color.

An indirect way was found of detecting the visual pigments in the intact eye of a living seeing human individual by shining different colored lights into the eye.

A temporary loss, or blank-out of vision, was found to affect travelers in Arctic snow on an overcast day, in fog or under an unbroken sky.

The most dominant individual in a flock of hens can be trained to be the most submissive and the most henpecked individual can learn to dominate, it was found.

Mynah birds were found able to learn to use words in a meaningful way to name objects.

Rats were found able to learn to be sensitive to the pain of other rats.

The rhythm of alternate feeding and ejection of the European lugworm was found to be guided by a "physiological alarm clock," and not by the biological needs of the worm; the rhythm is believed related to other inherent rhythms such as heartbeat in man.

The tail of a marine flatworm can retain conditioning even when cut off from the head end, indicating that learning does not take place exclusively in the head.

ROCKETS, MISSILES AND SATELLITES

U.S. Space Probe Reaches Greatest Height

Pioneer, man's first space probe and one of five planned shots, reached a maximum velocity of more than 23,000 miles per hour and a distance of 71,500 miles from the earth's surface, then burned up in the earth's atmosphere.

Pioneer III reached 63,000 miles above the earth's surface and had a maximum speed of 23,900 miles per hour.

An international committee on space research (COSPAR) was established by the International Council of Scientific Unions to plan scientific studies made with rockets, satellites, and space, lunar and planetary probes.

The National Aeronautics and Space Administration was established, taking over personnel, facilities and research activities from its predecessor, the 43-year-old National Advisory Committee for Aeronautics.

Spores were suggested as the original space travelers since it was found that they can live in the virtually airless atmosphere found high above the earth.

An international code was framed to keep damage at a minimum from a scientific point of view when landing objects on the moon or planets.

Plans were drawn for a satellite to orbit at a height of 400 miles in a path from pole to pole for studying the universe, and particularly the sun.

A science space board was formed by the National Academy of Sciences and the National Research Council to survey problems, opportunities and implications of man's advance into space.

A full-scale five-stage rocket was test fired and reached a speed exceeding Mach number 16 (10,516 mph) and an altitude of several hundred miles.

Atomic tests in the Pacific included some aimed at perfecting a missile-borne warhead that can be exploded in space in the path of incoming missiles.

Study of radio measurements of the Vanguard and Explorer satellites showed the ratio of the earth's flattening at the poles is 1 to 298.38.

A small rocket-powered device, called the Buck Rogers, was tested and permitted a soldier to run for several seconds at 35 miles per hour without tiring and to leap 20 to 30 feet.

"Ghost satellite" radio signals from Russian sputniks were received at stations 180 degrees away on the earth from the satellite's true position.

Radio signals from U. S. satellites were found to scintillate in the same way that radio sources twinkle.

Glide and skip rockets were under study as well as the intercontinental ballistic missile.

Solar cells, fuel cells and thermoelectric generators were investigated as power sources for instruments in guided missiles.

Nuclear batteries were found to be a promising power source for electrical and electronic systems in satellites and space vehicles.

Interplanetary ion-drive rocket ships powered at fantastic speeds by the tiny thrust of streams of electrically charged matter were shown to be practical.

The chemical energy stored in the earth's high atmosphere might be used to propel a satellite indefinitely at an altitude of 60 miles, a preliminary study of such a "fuelless" satellite showed.

The future orbit of an earth satellite can be predicted quite accurately from the change in frequency of its radio signals received at a single station during a single pass of the object, it was found.

Interplanetary dust that would bombard the skin of an earth satellite or space ship is much thicker than has previously been thought, possibly as dense as 200,000 specks each cubic mile, it was reported.

A pilot of a rocket vehicle re-entering the earth's atmosphere after having been weightless in space flight will have less tolerance to acceleration and less rapid recovery from space effect than in ordinary flight conditions of constant gravity, tests showed.

A 12-foot balloon to be placed in an earth-circling orbit from an Explorer satellite was successfully test-launched to a height of 50 miles.

A space age simulator was built that duplicated in the laboratory the tremendous heats and stresses any vehicle re-entering the earth's atmosphere at great speeds would have to withstand.

An apparent relationship was found between solar flares and changes in the rate of decrease of the rotation period of Sputnik II.

Adequate temperature control for sensitive instruments inside a satellite was obtained by coating the vehicle with strips of heat-radiating chemical.

A photoelectric method was devised for making precise observations of the path artificial earth satellites take as they circle the earth.

Use of the "pinch effect," employed in experiments for controlling thermonuclear fusion, to propel an unmanned vehicle on a one-way interplanetary flight was tested.

Aluminum squeeze tubes were tested as a means of feeding pilots dressed in space suits.

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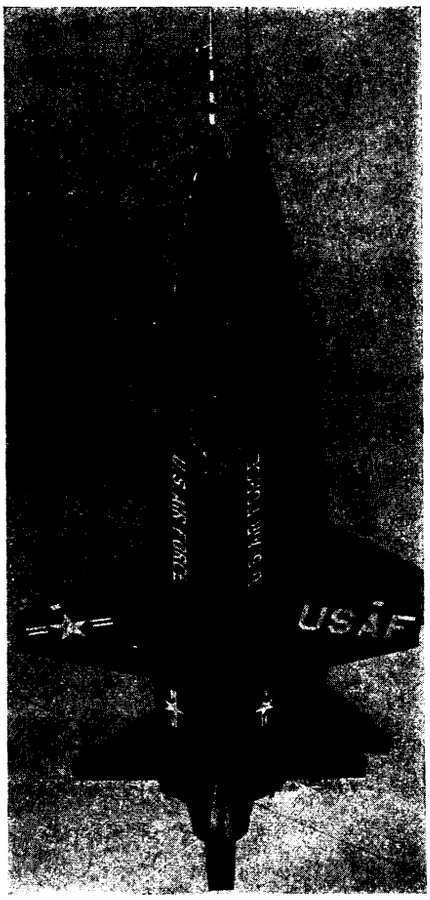

X-15 COMPLETED—The experimental airplane, the X-15, designed to fly at an altitude of more than 100 miles and at a speed of a mile a second, may be the first ship to carry man into space. Construction was completed in 1958 and tests are being conducted.

PUBLIC HEALTH

Alaskan Health Record Improved Over Ten Years

➤ ALASKA is still a pioneer land in one respect; accidents ranked first among the causes of death in 1957, accounting for nearly one-fifth of all deaths.

In other ways, Alaska's health record has improved measurably in the last ten years, statisticians of the Metropolitan Life Insurance Company, New York, reported. The mortality rate in the white population fell from 8.7 to 4.6 per 1,000, while the rate for non-whites decreased from 15.2 to 10.7 per 1,000.

Control of tuberculosis, a major health problem in Alaska, has been "particularly impressive." Between 1947 and 1957 the TB death rate fell more than 80%. Infant mortality is also declining.

Many serious health problems await solution for the non-white population, however. A five-year study shows the age-adjusted death rate for non-whites is 18.0 per 1,000, compared with 10.3 for the white population.

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