

# Questions

**AGRICULTURE**—In the drought of the 30's with what did birds build their nests? p. 35.

**ENGINEERING**—What is the new fuel being used in submarines? p. 42.

**GENERAL SCIENCE**—What is one advantage of underground storage of water for use during "water short" years? p. 38.

**MEDICINE**—From what are the fatty acids used in treating multiple sclerosis extracted? p. 38.

How can the measles virus be made harmless? p. 40.

**PUBLIC SAFETY**—What class of compounds is being used to prevent skidding on highways? p. 41.

**PHOTOGRAPHS:** Cover, Woods Hole Oceanographic Institution; p. 35, British Information Services; p. 37, All American Engineering Company; p. 39, New York University; p. 42, U. S. Navy; p. 48, Eastman Chemical Products, Inc.

## ASTRONOMY

### Find No Natural Satellite In Space Around Earth

► **WHEN MAN FLINGS** the first artificial satellite into space later this year, the chances are high the tiny sphere will not compete with any natural earth satellites farther out in space than it is.

Three years of an intensive search of much of the space around earth by Clyde

W. Tombaugh, discovered of the solar system's most distant planet, Pluto, show it is empty of relatively large material from 1,600 to 22,200 miles above the earth's surface. The space from 300 miles out to 1,600 miles is now being scanned for possible natural earth satellites from a site in Ecuador.

The first major phase of the work, supported by the Army's Office of Ordnance Research in Durham, N. C., was conducted at Lowell Observatory, Flagstaff, Ariz.

The equipment used by Mr. Tombaugh was so sensitive it could detect a clean white tennis ball only half illuminated to the observer at 1,000 miles above the earth's surface, or record a dark meteorite about one foot in diameter at the same height.

Mr. Tombaugh reported that his search disclosed a few "suspects," most of which were later found not to be natural satellites. Those not yet eliminated are being checked again from Ecuador.

The basic principle of Mr. Tombaugh's technique is the use of a Schmidt or other fast camera of wide field, moved at a rate to conform with the angular speed the supposed satellite would have across the sky. If a satellite actually existed, its image on the photographic film would be concentrated in a point image or dot, or a short trail.

The techniques he developed are expected to have definite significance in making observations of man-made satellites, which the United States and probably Russia are planning to launch in connection with the International Geophysical Year starting next July 1.

A determination that the space near the earth is free of debris up to a certain size would also be useful to long-range missile experts and to proponents of space travel.

Mr. Tombaugh's report notes that the surface of the moon may provide "grim evidence" of scars produced by collisions with matter flying about in space. Whether these scars were produced by asteroids or left-over debris from some process involved in the birth of the moon, or by some other method, is not known.

The earth has probably suffered from a comparable number of hits in the past, but vigorous action of water erosion has erased most of the evidence. On the moon, there is no appreciable erosion and thousands of craters, whose origin is still not settled, are easily seen with small telescopes.

Science News Letter, January 19, 1957

## PALEONTOLOGY

### Its Hoots Long Stilled, Fossil Owl Gets Name

► **SOME** long dead owl bones have been named and identified as a new fossil species closely related to the Barn Owl.

Dr. Loye Holmes Miller, emeritus professor of biology at the University of California at Los Angeles, has proposed as the scientific name of the bird, *Lechusa stirtoni*.

The fossilized bones of Stirton's Owl were among a collection of bone fragments

discovered by Joseph Arndt in a Pliocene-age formation in San Diego, thought to represent a shallow-water marine accumulation on tidal sand bars that serve as a resting ground for marine birds. The owl probably roosted in a nearby cliff.

Dr. Miller gives his reasons in the *Proceedings of the California Academy of Sciences* (No. 26, 1956) for choosing the name, *Lechusa stirtoni*:

"In northern Mexico and Arizona the name *Lechusa* (Latin-American spelling) is applied to the Barn Owl in distinction from the eared owls that are called *tecolote*. I have therefore chosen a generic name from the Spanish instead of the Greek." The specific name honors his colleague in paleontology, Dr. R. A. Stirton.

Science News Letter, January 19, 1957

## Do You Know?

The *sponge*, a relatively simple animal, has the ability to reassemble itself if broken into tiny pieces.

A new type *face shield* has been developed for use by troops or others required to work in extremely cold climates.

Next to the cereal crops, the *potato* is of major importance in Colombia and is grown widely at altitudes from 4,500 feet to almost 12,000 feet.

About one-third of world *wheat exports* for 1955-56 were made by the United States.

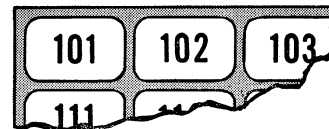
Connoisseurs claim the finest *pate de foie gras*, the goose liver delicacy, comes from Strasbourg in Alsace.

*Chromite* from low-grade domestic deposits, such as those in Oregon and Montana, can be treated to yield satisfactory alloying material for steelmaking.

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