

ASTRONOMY

**Kitt Peak Telescope
Now Near Completion****See Front Cover**

► THE WORLD'S LARGEST solar telescope is now being completed at Kitt Peak National Observatory in Arizona. The telescope consists of a 500-foot building, seen on the front cover, which is inclined at 32 degrees to provide a long focal length for observing the sun. The building will house an 80-inch heliostat mirror when completed.

Approximately 74,000 pounds of one-piece solid copper sheets have been installed by Revere Copper and Brass Incorporated, New York, to cover the slanting windshield to insure maximum temperature stability for accurate solar research.

• Science News Letter, 81:191 March 24, 1962

ENTOMOLOGY

**Flies Fly Mites;
Mites Fight Flies**

► FLY-FIGHTING mites flying mite-flying flies are biting the foot that feeds them.

A study of Macrochelid mites, found in manure, has revealed that five of the family feed on fly eggs. But fickle fate has not warned the flies, which transport the mites to their feast.

The lessening lesson for father house fly has not been learned. An expert on the fly-hopping mite proved that fly populations decreased at least half by the feasting.

The studies show these mighty mites are reducing the fly population naturally, but there are "other factors which deserve further investigation," Richard C. Axtell, entomologist at Cornell University, reports in *Farm Research*, 27:4, 1962.

• Science News Letter, 81:191 March 24, 1962

PHYSIOLOGY

**Passageways Aid Spread
Of Cancer Cells, Bacteria**

► DIRECT PASSAGEWAYS exist between lymph glands and adjacent veins, providing possible routes by which cancer cells and bacteria may get into the blood stream.

This has been demonstrated by Dr. Joel Pressman and Mildred Burtz Simon of the University of California, Los Angeles, Medical School who found the passageways by tracing the movements of air bubbles.

The lymph glands, or nodes, are an important part of the body's defense system against infectious processes. They produce white blood cells, which combat invading germs and other foreign matter and act as a filter system for the blood.

The lymph glands' normal channel to the veins is through a relatively lengthy series of lymphatic ducts. White blood cells are conveyed through these to their sites of action.

Medical scientists have suspected for some time, however, that there were other routes of access from the lymph nodes to the blood vessels. These may be opened temporarily

when the lymphatic ducts are blocked or are subject to more than normal pressure. This is the first time such routes have actually been demonstrated.

It is suggested that bacteria and cancer cells, filtered from the blood and lodged in the lymph glands, may be squeezed back into the blood stream through these tiny passageways. Manipulation of the throat in lymph node areas may cause this to happen.

Further study of these passageways will lead to a better understanding of the spread of cancer and bacterial infection of the blood stream, sometimes referred to as blood poisoning, the investigators said.

• Science News Letter, 81:191 March 24, 1962

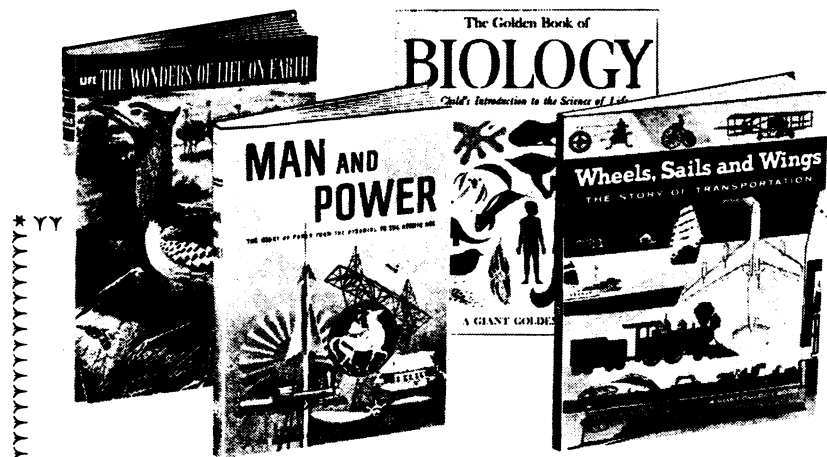
Questions

MEDICINE—When was hepatitis first recognized as a major health problem? p. 182.

METEOROLOGY—How many degrees below normal did Minnesota and Iowa average during the winter months? p. 178.

PUBLIC HEALTH—How much money does the tobacco industry pay in taxes each year? p. 181.

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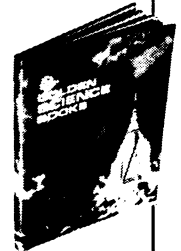
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