Questions

BIOCHEMISTRY—When does wound healing begin? p. 370.

GEOLOGY — What are believed to be the steps in formation of Colorado Plateau's uranium? p. 375.

MEDICINE—How effective is hypnosis during bone setting? p. 372.

PSYCHOLOGY—Why is it thought that one out of three Americans does not marry? p. 370. How many levels of sleepiness have been found? p. 373.

SURGERY—What are cholangiograms? p. 376.

PHOTOGRAPHS: Cover, Du Pont Company; pp. 371 and 375, British Information Services; p. 373, Hughes Aircraft Company; p. 378, Crippled Children and Adults of Rhode Island, Inc.; p. 384, Eastman Chemical Products, Inc.

Do You Know?

A single *witchweed,* a plant parasite, may produce up to 500,000 microscopic seeds.

At least one-third of all the *coffee* served in American homes today is made from instant products.

A $300,000,000 *water control* project in Florida, scheduled for completion in 1965, involves an area larger than Massachusetts, Connecticut and Rhode Island, and directly concerns a third of Florida's population.

World *rice* production in 1956-57 is expected to reach a new high record.

In Oak Park, suburb of Detroit, *traffic tickets* are issued to youngsters for jaywalking, running from between parked cars, playing ball in the street and riding bikes across busy intersections.

PSYCHOLOGY

Meeting Extraterrestrials

➤ EXTREME CARE will be needed in meeting any beings from other worlds that humans may contact during space exploration, Andrew G. Haley told the American Rocket Society meeting in New York.

The general counsel of the Society said treating non-earth creatures as if they were human beings might well mean the destruction of such creatures. He urged adoption of a new Golden Rule for space—Do unto others as they would have done unto them.

Mr. Haley assumes that any extraterrestrials space explorers might meet would be composed of the same elementary substances now known to man. They would be, he believes, large aggregates of these atoms capable of sensation, locomotion and thought.

Scientists should be able to place lower and upper limits on the size and weight of such beings, based on considerations of biophysics, the theory of logical machines, and the dynamics of bodies and structural analysis.

Flights into interplanetary space, Mr. Haley said, will have an appreciable effect only if any other-world creatures intercept enough energy radiated by a space ship to detect such energy above the background level.

This would be so whether the radiation is in the form of particles, heat waves or radio waves.

Using the probable limits of size and weight and of radiation effects, the closest distance a space ship can approach such a hypothetical being without having an effect can be calculated. Mr. Haley suggests calling this sphere surrounding an individual the "zone of sensitivity."

Space outside an individual's zone of sensitivity, he urged, should be free space to which the traditional freedom of the seas applies.

Mr. Haley quoted Dr. Harlow Shapley's conclusion that there is no longer doubt that whenever the physics, chemistry and climates are right on a planet's surface, life will emerge and persist, although it might not take the same form as human life.

Science News Letter, December 15, 1956

TECHNOLOGY

Telephone Pole Shortage

➤ THE CRY of "timber" is getting fainter in forests where tall timber is grown for use by utility companies on which to string their transmission lines.

The tall timber shortage was revealed by F. R. O'Brien, head of the engineering and metallurgy division of the Southern Research Institute, Birmingham, Ala.

Two problems seem to be plaguing the tall timber trees, one natural and the other man-made.

The first is the pileated woodpecker, who seems to enjoy knocking on electric utility poles. The second is the increased use of southern pine trees for saw logs and pulpwood.

The South, where poles from 60 to 80 feet tall are the traditional carriers for transmission lines, seem to be the hardest hit. With a good coating of preservative, these poles last from 20 to 40 years. However, with fewer trees ending up as upright poles and with woodpeckers chopping them up, the Institute reports that "it does not seem likely that the present shortage of pine poles will be relieved in the near future."

In an effort to solve the current shortage, scientists are trying to find suitable substitutes. They are currently experimenting with laminated wood poles, concrete poles and metal poles.

They also state that there is high hope for the use of plastic poles in the future. One such plastic pole has already been designed. In tests to date, the results of its suitability tests have been described as "excellent." The weight saved by plastic poles is an important factor. A 35-foot plastic pole weighs only 150 pounds as compared to its wooden counterpart weighing 780 pounds.

As for the woodpeckers, scientists are busy trying to discover the reason why the bird picks on wooden poles carrying transmission lines. If the reasons for the pole attack are found, Mr. O'Brien said, "methods of prevention may be devised."

Science News Letter, December 15, 1956

ENTOMOLOGY

Multicolor Cockroaches Found by "Black Light"

➤ THE COCKROACH has been found to be constantly emitting a rainbow of fluorescent colors.

The various tissues, organs and products of 19 species of the cockroach give out dark greens, bright blues and pale yellows, scientists at the U. S. Army Quartermaster Research and Development Center, Natick, Mass., report.

Visible only under ultraviolet or "black light," the multi-color cockroaches are constantly changing their fluorescent colors, Edwin R. Willis and Louis M. Roth state in the *Annals of the Entomological Society of America* (Sept.).

These changes in certain organs, the Army scientists think, indicate changes in secretory activity and may prove valuable visual indicators for further study of the small house pest.

Science News Letter, December 15, 1956