



### Animal "Stay-at-Homes"

► TO CALL SOMEONE a "parasite" means that he is an uninvited guest. In ancient Greece, rich men often had a score or more beggars, "party crashers" and penniless relatives eating from their tables every day—and the Greek word for these hangers-on was "parasite."

Today scientists use the term parasite for a creature that gets its nourishment from another kind of creature without giving anything in return. In fact, a plant or animal parasite usually harms its host.

In all the animal kingdom—from one-celled protozoans to the vertebrates—only two major groups have no representatives that live a parasitic existence. These are the sponges, and the spiny-skinned animals, echinoderms, such as the starfishes and sea urchins shown in the illustration.

Thus, the sponges and the echinoderms

might be called the "stay-at-homes" of the animal kingdom. No other animal can call them uninvited guests.

The sponges get their nourishment by sifting out tiny organisms and other food material from water. The echinoderms usually hunt through mud, sand and growth on rocks and pilings for their supply of food. Parasitic creatures, on the other hand, let their hosts do the food gathering.

The cause of the dread disease, amebic dysentery, is a single-celled parasite that lives in the human intestines. Parasitism is common among different groups of worms. Some worms, for example the tapeworm of humans, have come to rely so much on their hosts for food that they do not have a mouth. They merely absorb already-digested food from the host's intestines through their skin.

Even snails—shell and all—have members that are parasites. Parasitic snails are found that feed on fishes, embedding in their flesh and taking their nourishment from the body of the hosts.

Although the lower animals are generally thought to contain all of the parasitic forms, even the vertebrate animals can count a parasite among their numbers. There is a small fish from South America that habitually lives on the gills of larger fishes, sucking blood.

Science News Letter, July 21, 1956

### GERIATRICS

## Old Age in Olden Times Studied

► TO LEARN what it would have been like to grow old in olden times, Dr. Maria S. Haynes, of the University of California, spent three years studying the views of old age held by ancient Greeks, Romans and Middle Easterners, and by Europeans in the Middle Ages. She drew her material from literature of the period.

According to Dr. Haynes' report:

If you had lived in the Middle Ages, you would have found little sympathy for oldsters from among the general population. Except for a few learned men, people would have thought your physical failings were punishments for the sins of youth. You would have been encouraged to distribute your possessions among your children before you died, since poverty was considered important to salvation.

If you had been an elderly man in ancient Rome, you would have been respected and obeyed, chiefly because you would have had the power of life and death over everyone in your household. A wayward son who displeased you could legally have been sold into slavery or killed. You would also have controlled the family wealth.

Had you grown old among the ancient Greeks your view of life would have been much like our own. You would have realized physical ills accompany old age and grudgingly accepted them. You may have thought the mind could be kept from decay by reading.

Science News Letter, July 21, 1956

### TECHNOLOGY

## Phosphate Mining Machine Developed

► A PHOSPHATE ROCK mining machine that eliminates blasting and yields more ore has been developed by the U. S. Bureau of Mines.

Called a "planer," the device chips out ore with pneumatic chisels. It is designed for underground rather than open-pit mining. The phosphate planer is lighter and less bulky than its cousin, the coal planer, now being used in several eastern mines.

Science News Letter, July 21, 1956

### GENERAL SCIENCE

## Trade Groups Set Pattern For Industrial Research

► TRADE ASSOCIATIONS and other cooperative groups spent \$21,000,000 for research and development in 1953, a survey conducted by the National Science Foundation shows.

The report is significant because it reveals the influence research policies of cooperative organizations have upon industrial research practices. The questionnaire was answered by 543 cooperative groups—trade organizations, professional and technical societies, and research-educational cooperatives.

Dr. Alan T. Waterman, director of the National Science Foundation, said the influence on research policies of these groups is much greater than dollar expenditures alone would indicate. As an example, he cited the American Petroleum Institute, a trade association that, by its conduct of basic research, has contributed much of the fundamental knowledge underlying the petroleum industry today.

The survey was conducted for the Foundation by Battelle Memorial Institute, Columbus, Ohio. It is one of a series that, when completed, will provide the first overall view of scientific research and development in the United States.

Science News Letter, July 21, 1956

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Science News Letter, April 21, 1956

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