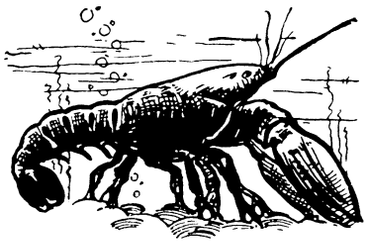
ZOOLOGY

NATURE RAMBLINGS



Lobster

➤ AN earlier generation once took great delight in a story about a Midwestern farmer who refused a lobster on the grounds that he "didn't eat bugs." Modern refrigerated railroad cars and anywhere-any time air cargo service has made it possible for the innermost of inlanders to have lobster regularly now. Most of us "eat bugs" even if our grandparents could or would not have them in the house.

The farmer of the anecdote was not so far wrong at that. The lobster and his relatives the crab, shrimp and inland "crawdads" really are cousins of the insects. They form the marine division of the great order of Arthropoda, which means "jointed-leg animals," just as the insects form the infantry and airborne divisions. The lobster and his relatives are known collectively as the Crustacea because of the hard shell, or crust, in which they are encased.

Lobsters and insects are alike in having jointed bodies and legs, in having their skeleton on the outside rather than the inside of their bodies, in having compound eyes made up of a mosaic of little eyes, and in many other respects.

The lobster differs from the insect in the obvious matter of having no wings; he would have little use for them in the watery depths he inhabits. Neither does the lobster have a division between head and chest, such as an insect has; his chest begins right under his chin, without formality of a neck.

As if to make up for his lack of wings, the lobster has two pairs of antennae or feelers. The insect has but one pair. And finally, while the insect has only six legs, the lobster glories in ten. He has two of the most powerful sharp-ridged claws in the marine kingdom and no hesitancy in using them if a careless fisherman picks him up by the wrong handle. By reason of his legs and claws, the lobster and his nearer relatives are known to zoologists as "decapod crustaceans."

Only very recently has science begun to suspect that the lobster has a hidden talent which puts him in the company of such skilled navigators as the homing pigeon and the honey bee.

Experiments with lobsters off Bermuda showed they can return unerringly to their favorite feeding grounds even when taken far out into deep water or to the other side of large land masses. Drs. Edwin P. Creaser and Dorothy Travis of the Bermuda Biological Station believe lobsters are fully "aware" of where they are and have a remarkable homing instinct. The how and why of the trait remains an unanswered and puzzling biological mystery.

Science News Letter, September 9, 1950

MINING

Roof Bolting Prevents Roof Falls in Mines

➤ THE use of roof bolts to prevent roof falls in mines, the cause of many fatalities, was called in Salt Lake City one of the most progressive steps ever taken in promoting underground safety.

The statement was made by M. C. McCall of the U.S. Bureau of Mines at the meeting of the American Mining Congress. Roof bolting is sponsored by the Bureau, he said, because safety and maximum efficiency go hand in hand. The use of roof bolts is approved by miners and management alike.

Roof bolts, which replace in part the pillars of earth or timbers to support the roof after ore is removed, are steel rods driven into the roof either vertically or at an angle to hold the layers together. Rods of wood, in drilled holes, have been successfully used where corrosive water gives short life to steel pins.

Roof bolting is not a new idea but its use has greatly increased recently. Labor requirements are much reduced by this system of ground support, Mr. McCall stated. Tonnages of ore have increased steadily, and production crews need not wait for timber crews to stand timber.

He reported the results of roof bolting in both lead and iron mines. All iron ore mines in Alabama in which roof bolts have been installed attained the best injury records in their history in 1949, he stated.

Roof bolting is coming into rapid use in coal mines, another meeting of the American Mining Congress was told earlier this year by Edward Thomas, also of the Bureau of Mines. In 1949, he said, approximately 200 coal mining companies were using bolts to support 14,000,000 square feet of roof surfaces.

Science News Letter, September 9, 1950

GENERAL SCIENCE

Triple Science Manpower Needed for Survival

➤ TRIPLE America's present scientific manpower is needed for national survival. Prof. John S. Nicholas of Yale warns that we are in competition with keen scientific minds in Russia that "already have access to much of the same knowledge stockpile that we have." He wants a national program, like the GI college program, that will select early the outstanding minds with scientific aptitudes, give them a rapid and rounded education and subsidize those who prove to be creative scientists. These scientists would produce the information that can be engineered into technical progress needed for a long and continuous struggle with communism.

Science News Letter, September 9, 1950