

GEOLOGY

Land Features Can Tell How to Find Oil

► OIL HUNTERS now have an accurate set of landmarks to help them recognize country under which oil may be hiding.

The landmarks have been studied and described by two petroleum geologists, Dr. G. M. Knebel of Standard Oil Co. of New Jersey, president of the American Association of Petroleum Geologists, and Guillermo Rodriguez-Eraso of the Creole Petroleum Corporation.

According to the scientists' report, you may be rich if you own land on the most level side of a large basin, in an area of sandstone or carbonate rocks, with a few folds in the ground called anticlines.

If you own such land, you may find oil between 2,000 and 8,000 feet below the surface.

The two scientists studied the characteristics of most of the world's major oil fields. They concluded that oil explorers would profit by paying more attention to the land's features.

The study reveals that most oil is found on the stable side of sedimentary basins. The stable side is not as steep or rugged as the others. Porous rocks, usually sandstone or carbonate, are indications of oil when found along with the other features.

The world's truly giant oil fields, which the scientists say are those with reserves of more than 10,000,000,000 barrels each, are confined to the Middle East with the exception of one in western Venezuela.

The Middle East yields more than 20 times as much oil as North America and nearly 10 times as much as South America, despite the fact that North America has 177 major oil fields compared with the Middle East's 21. The study shows that most of the Middle East fields have a total of 1,000,000,000 or more barrels of oil each, while about five of North America's are in this class.

The scientists report their finding in the *Bulletin of the American Association of Petroleum Geologists* (April).

Science News Letter, May 19, 1956



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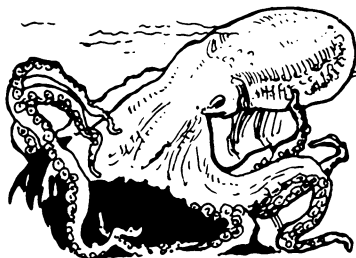
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BIOLOGY

NATURE RAMBLINGS

by Horace Loftin



Octopus Homecoming

► IT WAS a calm day, and the sun beat down strongly as the scientist waded on the shallow mud flat, peering into the smooth water for interesting marine life. His eyes lit on a conch shell, and he picked it up.

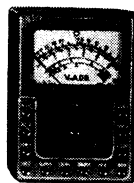
Instead of the large, muscular "foot" of the living conch, two beady eyes surrounded by soft, mottled flesh stared out at the scientist from the opening of the shell.

An octopus had taken over the conch shell as a home.



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Although the conch shell was only about nine inches long and six inches broad, the octopus that climbed out of it in alarm measured at least 15 inches from the top of his head to the tip of his eight suckered arms. Apparently the octopus had pushed his arms and soft body far into the spiral chamber of the empty conch shell.

The scientist was startled at first to see those eyes gleaming from the shell, but as soon as he realized what had happened, his reaction changed to wonder.

For the slow-moving, well-shelled conch and the tentacled, fast-swimming octopus—so unlike on the surface—are really very close kin. Through the process of evolution, octopuses have given up the protection of a shell to become free-swimming creatures. What the scientist saw was something like a "homecoming."

In search of shelter, the octopus had taken over the shell of a conch, something like the kind of home his ancestors had abandoned so many millions of years ago.

Besides the conches, octopuses must claim such creatures as clams, oysters, snails, abalones and slugs as kin. All belong to that large group of animals called the mollusks. More closely related to the octopus are the squid and the nautilus.

The eight-armed octopus has given up all trace of a shell except a pair of small vestiges to which muscles are attached. The ten-armed squid retains an internal shell, the "cuttlebone" placed in bird cages to supply calcium, which serves to make it more rigid.

The chambered nautilus, famed in poetry for its beauty, does have a complete shell, one which scientists call in many ways the "most primitive" of molluscan shells.

Science News Letter, May 19, 1956

MEDICINE

Cancer Fighters Now Feel Hopeful

► A DECADE of progress in the fight against cancer is giving cancer fighters a feeling of "quiet optimism," Mefford R. Runyon, vice-president of the American Cancer Society, declared in making public the society's annual report.

The 400,000 Americans now in active life who have been cured of cancer are part of the reason for the present hopeful feeling of cancer fighters. So is the fact that another 800,000 could be cured of cancer in the next decade by intensified effort to apply presently known methods of diagnosis and treatment.

Other cheering facts from the report:

The cancer death rates for women have declined 10% in the past 10 years.

Male deaths from cancer of the stomach, liver and skin have decreased slowly but steadily.

More discouraging, however, are the increases in leukemia, and in cancers of the ovaries, pancreas and intestines, and the rapid increase in lung cancer.

Science News Letter, May 19, 1956