

MEDICINE

Snakes Battle Cancer

Rattlesnake that died with lump on its neck started experiments in transplanting tumorous growths from dead snakes to live ones and from one variety to another.

► RATTLESNAKES, bothered by cancer just like humans, now are in the battle against the nation's second most deadly disease. The dangerous snakes have joined the crusade at New Mexico University in a study probing tumorous growths in reptiles. Guiding the work is 34-year-old William Jones-Burdick, University herpetologist and biology professor, who never expected to be doing it.

The study began more than a year ago when he discovered a rattler with a lump on its neck. The snake soon died and an expert's examination brought up a diagnosis of cancer, the ninth reported case of its kind. Prof. Jones-Burdick's interest was aroused. He rolled up his sleeves and got the project under way.

Other experts consulted since question the cancer diagnosis and suspect an animal or plant parasite. But in any case, the project is not invalidated. That is because cancer results from abnormal cell growth, and much cancer research is aimed at a better understanding of cell growth in general in an attempt to get at the heart of the problem.

Prof. Jones-Burdick's work, aimed chiefly at understanding the mystery cell that kills his snakes, simultaneously has been going in two directions:

First, he has been successfully transplanting the tumorous growth from dead rattlesnakes to live ones. The transplanted tissue causes a tumor in the live snake. Cells from the tumor somehow travel to vital organs, attach to those and grow, crowding out the vital organs and causing death. Four to six months after being transplanted with only one exception, the disease kills the snakes.

Second, Prof. Jones-Burdick has been transplanting the lumpy growth from rattlesnakes to bull snakes and other varieties of snake. This is about as unusual as transplanting the growth from a horse to a man. However, it may be a characteristic limited to cold-blooded animals. Prof. Jones-Burdick does not know yet.

Like many other researchers in the field, he is not looking for a cure for cancer. His aim is to understand the exact nature of the deadly cell that kills his snakes and perhaps so to get a better understanding of cell growth in general. He would be pleased if over a span of years he uncovers a small bit of information that, when fitted with information uncovered by other researchers, would fall into a pattern for conquest of cancer.

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RESOURCES

Plenty of Crude Oil

► THERE IS plenty of crude oil, natural gas liquids and natural gas underground in the United States, at least for the near future, the American Petroleum Institute and the American Gas Association report. They back their statement by figures.

Proved reserves of these sources of power, heat and hundreds of chemicals were boosted to new all-time peaks during 1950, they declare in a joint report. This report covers new discoveries made during the year, and revisions of previous estimates and extensions of known pools.

Total new supplies of crude oil and natural gas liquids developed in 1950 amount to an estimated 3.3 billion barrels. With total production of liquid hydrocarbons at close to 2.2 billion barrels, this produced a net increase of more than 1.1 billion barrels in proved reserves.

Proved reserves of liquid hydrocarbons at the close of 1950 were estimated at 29.5 billion barrels. Proved reserves of natural gas were estimated at 185 trillion cubic

feet. This is a net increase of 5.2 trillion cubic feet, but production exceeded the new discoveries. Production during 1950 is estimated at 6.8 trillion cubic feet.

The proved reserves of crude oil, natural gas liquids and natural gas referred to in the report apply only to those reserves whose locations and extent have been proved and measured. They do not include any estimate of oil or gas which may underlie the vast untested American acreage which appears favorable to the accumulation of oil and gas.

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ENTOMOLOGY

Range Pest Beaten By Imported Beetles

► SCIENTISTS have apparently defeated the Klamath weed, a noxious plant pest on California range lands, by importing a beetle from Australia and letting it eat the weed.

A report by J. K. Holloway, USDA entomologist, and C. B. Huffaker, University of California College of Agriculture, revealed that the beetle is now established on all 21 of the California counties where the Klamath weed exists.

In Humboldt County, for example, 5,000 adult beetles were released in 1946; last year 3,000,000 were collected for redistribution to other areas. Even so, the beetles removed were only a small part of the total population.

In addition, the beetles disperse by walking and flying—thus increasing the acreage in which they are effective. In four years' time, they spread a distance of six or eight miles, and instead of covering one small field are found over 100 square miles.

The Klamath weed is especially detrimental to sheep and cattle. Although not palatable, livestock will graze on it when no better forage is available. Eating the weed causes the white-skinned parts of an animal's body to become sensitive to sunlight. Blisters form on these areas when exposed to the sun and the animal becomes scabby, sore-mouthed and underweight.

First discovered along the Klamath river in 1900, the weed gradually spread over about 400,000 acres of California's open-range by 1944, greatly cutting its value as grazing land by displacing desirable forage.

Hardy and difficult to control, the plant pest will survive mowing and heavy grazing by sheep and goats. And it has a rapid rate of recovery on over-grazed or burned-over range.

But when the imported Australian beetles are turned loose on the Klamath weed, it soon succumbs. The beetles eat the leaves, photosynthesis comes to a halt and the root system weakens. This is by far the most economical, large-scale method of control.

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AGRICULTURE

New Potato Resistant To Two Diseases

► HOUSEWIVES and Midwest farmers will cheer the Cherokee if this new potato variety lives up to reports on it.

Released jointly by the U. S. Department of Agriculture and the Indiana and Iowa Agricultural Experiment Stations, the Cherokee is the first potato variety to carry high resistance to both blight and scab disease. It holds promise for production on Middle Western soils now so badly infected with scab organisms that a susceptible variety like the Irish Cobbler cannot be grown.

The Cherokee has given high yields and a high percentage of U. S. No. 1 potatoes when tested on muck soils. It has an attractive smooth white skin and good cooking quality and is particularly good for baking because of its high specific gravity.

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