

MEDICINE

Cancer Chemistry Probed

Discover fundamental difference in body chemistry between cancer patients and normal women. May show why hormone treatment effective against breast cancer.

► A FUNDAMENTAL chemical difference between cancer patients and normal women has been discovered by Drs. Erwin Schwenk and N. T. Werthessen of the Worcester Foundation for Experimental Biology, Worcester, Mass.

The difference is a fundamental one because it is a difference in the machinery of body chemistry. Other scientists have found differences in the results of body chemistry between cancer patients and normal persons, but this is believed to be, with one exception, the first difference discovered in body chemistry mechanism in cancer.

The discovery is related to female hormones and may lead to better understanding of why female hormone substances are effective in treatment of some breast cancers.

If the female hormone chemical, estrone, is put into the blood of young women or girls, something in their blood makes the hormone disappear. The Worcester scientists cannot detect it by their testing methods.

If this chemical is put in the blood of normal women past middle age, it stays there. And if it is put in the blood of women past middle age who have cancer,

it disappears, as it does in healthy young women.

The Worcester scientists think the disappearance of the hormone chemical is due to an enzyme, but they are not sure of this yet. Further research, they hope, will clear up this point and perhaps lead to more effective cancer-fighting.

Science News Letter, March 31, 1951

TECHNOLOGY

Test Food Processing In "Pilot Wing"

► A SO-CALLED "pilot wing," where research can be conducted under simulated commercial conditions, will be outfitted with machinery and equipment for duplicating any process now in use by the food industry.

It is a major feature of the new \$1,000,000 Food Technology Division building to be completed next fall at the University of California's College of Agriculture, Davis, Calif. The wing will serve as a laboratory for instruction of students in semi-commercial operations and for practical application of research. Numerous food processes will be studied and prac-

ticed—such as dehydration, freezing, canning, evaporation, pickling and packaging.

The wing will also be used to run co-operative tests on new varieties of fruits and vegetables developed by other divisions of the college. These new varieties will be put through trial packs to test their potentialities as commercial products.

The cold storage and incubator rooms will enable technologists to make tests under greatly varied conditions. Deterioration of fresh and processed foods under long and short-term storage at different temperatures can be observed.

Humidity-control tests can also be made. For example, the relative loss of weight by apples stored in different humidities and temperatures can be measured.

The incubator room will be used for culturing yeasts, bacteria and viruses for experimental work.

A relatively new concept of checking the acceptability of foods will be employed in the food-tasting section. When foods are to be tasted, a special air conditioner will keep the room clear of foreign odors. Each taster will be in a small cubicle so that he cannot see other tasters. Facilities for controlling color of light will also be used to reduce possibilities of influence by color of foods.

Science News Letter, March 31, 1951

MARINE BIOLOGY

Baby Spiny Lobsters Roam Far To Grow Up

► BABY spiny lobsters have the wanderlust, so it would seem, for marine scientists have found they may travel many hundreds of miles from their place of birth to the sea bottom where they grow up.

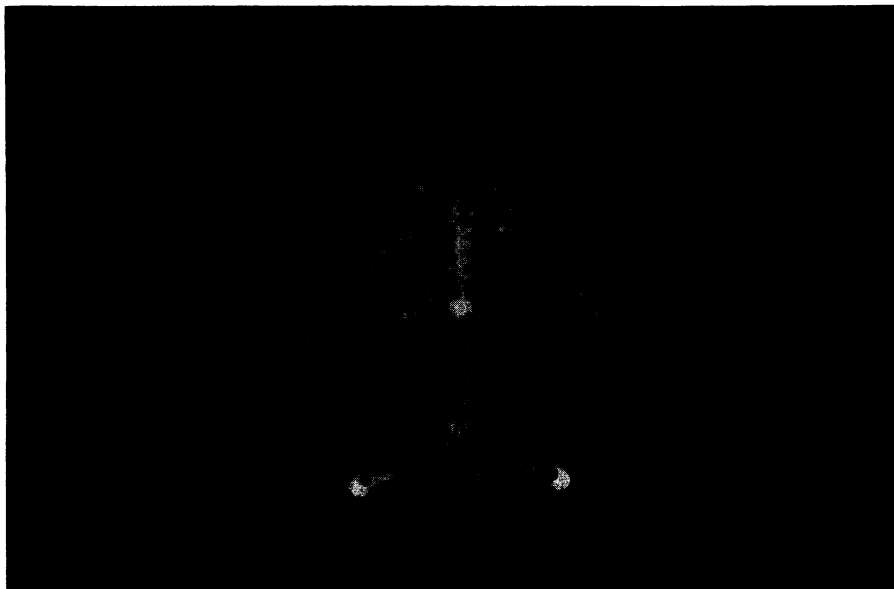
The story of these infant ocean travelers and of other marine life is now being unraveled through study of the tiny plants and animals drifting in the Gulf Stream's warm current. Fine mesh nets are towed from a ship to bring up hundreds of kinds of microscopic sea life, lumped under the general name of plankton.

The long-legged baby lobsters, looking somewhat like spiders, are transparent. When in water all but their pigmented eyes disappear. Twelve stages in the infant lobster's life have been studied so far.

The net-fishings that bring up the great variety of Gulf Stream marine life are a part of a year-round plankton research project directed by Dr. F. G. Walton Smith and Dr. Hilary B. Moore, of the University of Miami Marine Laboratory. The project is sponsored jointly by the University and the National Geographic Society.

The role of plankton in the ocean's economy is still a mystery. Drifting plankton pastures are as necessary for good fish nutrition as grasses and vegetation are for land animals.

Science News Letter, March 31, 1951



ROAM FAR—Baby Florida spiny lobsters, almost transparent at this stage of development, have been found to travel many hundreds of miles from their spawning place to the sea bottom where they grow to maturity.