

## PUBLIC HEALTH

# Report Cosmetic Hazard

BREATHING in hair spray was responsible for one woman's symptoms of cough, loss of appetite and suspicious shadows on her lungs, a British scientist reports.

Other cases of similar shadows which show up in X-rays and have no known cause may be due to inhaling hair spray, suggests Dr. B. G. Edelston, physician-in-charge at the Folkestone and Dover Hospitals' chest clinics.

All tests for tuberculosis and other diseases, blood tests and physical examinations were normal in the woman studied. However, she had a year-long history of cough, loss of energy and appetite and a general "un-well" feeling. Chest X-rays showed enlargement of the lymphnodes in both lungs. The patient said that she had used two well-known brands of hair spray beginning about 12 months previously. She had used them perhaps twice a day for about six months, and then stopped.

Several researchers have found that natural and synthetic resins—the "varnish" in the hair spray—can produce granulomata or granule-like lumps in the lungs, Dr. Edelston reports. Although laboratory experiments have shown some of these substances can cause cancer-like growths in rats and mice, their effect on human beings

is still not clear. Possibly 15 to 30 years may have to pass before such tumors develop in a person, Dr. Edelston points out.

"The increasing use of cosmetics in all countries may create new medical problems because some constituents used in their manufacture are unknown," the British scientist says. "Usually these formulas are jealously guarded secrets and the makers are not as a rule in a position to estimate the possible dangers to users of their products. Hair sprays thus come into the category of hazardous aids to beauty, despite the careful directions for their application on the containers."

Manufacturers might advise women to use face-masks before using the hair sprays and to move out of the spray as quickly as possible, Dr. Edelston suggests.

Several months after the patient's first X-rays, her lungs appeared almost normal. The irritant may have been removed from the lungs and stored elsewhere in the body, possibly in the liver or spleen. The ultimate effects of the irritant can be determined only by long observation, Dr. Edelston concludes. Details of his study appear in *The Lancet* (Aug. 15).

Science News Letter, September 19, 1959

also is reflected in a sudden decrease in the rate of clay accumulation in the equatorial Atlantic and by a change from ventilated to stagnant conditions in the Cariaco Trench off Venezuela.

Attempts to find whether this oceanic event has a counterpart on land, the scientists said, suggest that pluvial, or rain-formed lakes, in the Great Basin, the desert area of the western U. S., dried up rapidly. They also suggest that the ice in the Great Lakes region retreated rapidly and that the Mississippi River underwent a rather sudden change in its mode of operation.

## Find Buried Jellyfish

FOSSILS of jellyfish and other soft-bodied marine animals found in the rocks of past geologic ages may be the remains of organisms buried in a beach.

Louis S. Kornicker and John T. Conover of the University of Texas told the Oceanographic Congress severe storms that cause high waters and kill numerous fish can deposit an abundance of such animals above the level of high tide. There they can easily be buried by sand.

A recent severe storm in Aransas Pass, Texas, caused the ocean waters to rise 3.2 feet above normal high tide level. Several days after the storm, the scientists noticed a series of small depressions in the beach sand in an area several feet above normal high tide.

Remains of jellyfish in various stages of decomposition were found in several of the depressions. The remaining depressions were easily recognizable as having been formed by the same species, one that occurs in large numbers in that area.

At first, all the depressions were believed formed by jellyfish that had been partially covered by sand. But further inspection revealed that many depressions were the result of a caving in of sand over jellyfish that had been completely buried. Many were buried two to three inches below the surface and were not indicated by surface depressions.

The process by which the jellyfish were buried was probably similar to the way in which shells are buried.

Science News Letter, September 19, 1959

## PSYCHOLOGY

## Little Noise and Light Can Help You to Sleep

THE OLD joke about the man who could not sleep because the quiet kept him awake has received scientific support. Dr. R. C. Davis, Indiana University psychologist, reports people relax better in a little noise and light than they do in a dark sound-proofed room.

Subjects in the dark and quiet showed increased muscular and circulatory activity and decreased respiration, Dr. Davis reports in the *Journal of Comparative and Physiological Psychology*.

This pattern, Dr. Davis explains, is characteristic of anticipation. The subjects in the dark, he said, may have been less relaxed because they were "expecting something to happen."

Science News Letter, September 19, 1959

## OCEANOGRAPHY

# Undersea Vessel Designed

AN UNDERSEA research vessel capable of exploring the oceans at all depths is being designed by the U. S. Naval Ordnance Testing Station, China Lake, Calif.

The vessel's design is based on the principles established by Auguste Piccard in his bathyscaphs. However, the new vessel is expected to be more mobile, have a greater cruising range and carry more scientific equipment than any previous deep-diving vessel.

Still in the design stage, the vessel was described to marine scientists attending the International Oceanographic Congress at United Nations, N. Y., by Dr. Rene L. Engel and Firth Pierce of the Testing Station. Once appropriations are received, Dr. Engel said, the vessel should take about a year to build.

Known as the DRV—for deep-sea research vessel—the 69-foot vessel has a streamlined shape, resembling a submarine more than the spherical diving bell.

Approximately nine feet in diameter and weighing 83 tons, the vessel consists of two pressure resistant spheres. The forward sphere accommodates a crew of three and all control, navigation and recording equipment, and the rear sphere contains batteries and other automatic equipment.

The forward sphere has a controlled atmosphere for 36 to 48 hours' submergence. The duration of each dive will be limited by fatigue of personnel, because sleeping quarters are not included.

Between the two spheres is a ballast tank and a flooded compartment containing equipment for obtaining and storing bottom samples.

Buoyancy will be provided by pentane or non-inflammable ammonia solution, and will be controlled by magnetically retained steel-shot ballast. The designers are also experimenting with the idea of using a soluble ballast for simpler operation. Two 20-horsepower motors in the after-body will propel the vessel at a velocity of six knots over a range of about 150 miles. The overall design is intended to give little surface friction with the water. External bow planes will permit quick vertical maneuvering. A long, pointed bumper at the nose of the vessel will carry a light and an acoustic detector.

## Sea Water Hotter

ANALYSES of ocean cores suggest that the increase in the temperature of the ocean surface at the end of the last glacial period occurred rather abruptly about 11,000 years ago.

The analyses were measurements of carbon-14 content and were described by Dr. Maurice Ewing, director, and Drs. Wallace S. Broecker and Bruce C. Heezen of Columbia University's Lamont Geological Observatory, Palisades, N. Y.

The scientists said the change in oceanic conditions that brought about this warming