

and other planes will have to be properly equipped. There is a necessary transition period, and during it control towers will

necessarily use their older existing equipment as well as the new VHF equipment.

*Science News Letter, September 1, 1945*

is possible to locate magnetic ore bodies, and many other geological formations.

A technical report of this Florida survey has been prepared by the Bureau of Mines and is available at the Washington office.

*Science News Letter, September 1, 1945*

#### MEDICINE

## Pain of Shingles Relieved

Injections of the local anesthetic, procaine hydrochloride, into appropriate masses of nerve cells gives instant relief from herpes zoster.

► THE INTENSE pain of herpes zoster, or shingles as it is popularly known, can be relieved instantaneously and permanently by a nerve block treatment, Dr. Thomas Findley and Dr. Reynold Patzer, of Tulane University School of Medicine, New Orleans, report. (*Journal, American Medical Association, Aug. 25.*)

The treatment, known technically as paravertebral procaine block, consists of injections of the local anesthetic, procaine hydrochloride, into appropriate masses of nerve cells. The method is not new. It was reported by Dr. S. Rosenak, of Budapest, in 1938 and by an American physician, Dr. A. Street, in 1943. Physicians generally, however, are not acquainted with the method, it appears from the report of Drs. Findley and Patzer.

A woman who had had "virtually no rest" for seven days in spite of large amounts of sedative and pain-relieving drugs was completely relieved of the severe pain within 10 minutes after the nerve block was performed. She is among the four patients whose cases are reported by the New Orleans physicians.

A total of 29 cases, including these four, has been reported so far as having had this treatment. In only two was there failure to produce prompt and lasting relief.

Besides the prompt relief from pain, the blisters heal rapidly.

The treatment is not difficult, the physicians report, and "practically without danger if only procaine or allied anesthetic drugs are used and if one is familiar with anatomy."

A virus closely related to that of chicken pox is the cause of shingles, or herpes zoster. The condition is an acute inflammation of certain spinal ganglions, or collections of nerve cells, with various degrees of degeneration in corresponding sensory nerves. The extent of the skin eruption seems to parallel the intensity of the nerve inflammation.

The nerve block treatment relieves the

pain, the physicians state, by interrupting a vicious cycle of nerve impulses and abolishing the blood vessel spasm resulting from some of these impulses.

*Science News Letter, September 1, 1945*

#### GEOPHYSICS

## Magnetic Survey Shows Probable Petroleum Areas

► A MAGNETIC survey, by the U. S. Bureau of Mines, of the Florida peninsula shows areas in the lower part of the state that are favorable for the occurrence of petroleum. This first examination of almost an entire state has proved also the usefulness of this type of geophysical investigation for mineral and petroleum exploration over large areas, according to Dr. R. R. Sayers, Director of the Bureau.

Speed, economy, and the large amount of information obtained about the geology and sub-surface bedrock topography of a region are the outstanding advantages of this survey method, he states. A magnetic survey is the logical start in undertaking geological surveys of large areas, especially in regions devoid of out-crops.

Essentially, a magnetic survey is a method of determining the contours of the underlying granites and other formations—known to the geophysicist as the "crystalline basement." A knowledge of the crystalline basement, particularly in areas covered by marine sediments, he explains, is of fundamental importance to oil exploratory work.

Long ago it was observed, he continues, that magnetic masses within the earth, such as iron deposits, would affect an ordinary compass. These localized magnetic forces now have been harnessed by the precision instruments used in a magnetic survey. Employing a magnetic needle free to swing in a vertical arc, they measure variations, known technically as "anomalies," between local magnetic attractions and the normal magnetic field. With this information it

Mosquitoes of the genus *Psorophora* have the habit of laying their eggs in grassy areas that are likely later to be flooded by heavy rains; when the lands are flooded, the larvae hatch out and have water in which to develop.

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