concluded, were due to prolonged droughts that killed the protecting cover of vegetation and permitted erosion for a time.

Water from the Black and Mediterranean seas, pouring out through the Strait of Gibraltar, spreads itself out through a large part of the Atlantic Ocean, Dr. H. U. Sverdrup, director of the Scripps Institution of Oceanography, stated.

The water from the Mediterranean, easily detected because it is saltier than ocean water, is found at levels between

4,000 and 6,000 feet below the surface, said Dr. Sverdrup. It spreads out through the entire North Atlantic, crosses the Equator, and can be traced past South Africa. At still greater depths water from the North Atlantic flows south, and along the bottom water from the Antarctic flows north as far as the middle of the North Atlantic.

In general, the California scientist reported, the oceanic circulations of the Atlantic and the Antarctic are better known than the water movements in the Pacific and Indian oceans.

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PUBLIC HEALTH

Parran Endorses \$200,000,000 Anti-Tuberculosis Campaign

SURGEON GENERAL Thomas Parran, Jr., of the United States Public Health Service endorsed a \$200,000,000 drive by the National Tuberculosis Association for the complete eradication of the "white plague" in the United States.

The plan for tuberculosis control, worked out by a committee headed by Homer Folks, executive secretary of the State Charities Aid Association of New York, was adopted by the association at its thirty-fourth annual meeting in Los Angeles.

The suggested program, to start in 1939, would require \$140,000,000 for the construction of 40,000 hospital beds for tuberculosis patients. Funds for this job, it was indicated, would come from a variety of sources, including state governments and Federal funds from such sources as the Works Progress Administration, which has already provided hospitals and equipment totaling nearly 10,000 beds.

Industry Blamed

The unwillingness of industry to reemploy ex-tuberculous persons may force the adoption of an expensive Federal and state pension system, Edward Hochhauser of New York's Altro Workships, an institution for providing work for arrested cases of tuberculosis, warned.

Speaking before the National Tuberculosis Association, Mr. Hochhauser termed such a refusal to rehire former sufferers from the "white plague" unsound economically and sociologically.

Tuberculosis no longer should be

looked upon as a permanently disabling disease and more attention must be paid to rehabilitation work, it was said generally before the association, holding a symposium on handling of arrested or cured cases.

Scoring industry's unwillingness to employ these people, Mr. Hochhauser declared:

"The testimony of industry can now be added to that of sheltered workshops. Responses from several hundred employers indicate that a very substantial number of employable tuberculous go back to their old jobs or some readjusted job with their old employer, many on part time.

"Sheltered workshops and colonies for patients have demonstrated that men and women may gradually return to normal work with partial or complete self-support."

Asks Social Security

A plea for Social Security relief for the families of tuberculosis victims was made by Homer Folks.

Speaking at a luncheon meeting of the National Conference of Tuberculosis Secretaries, Mr. Folks called suitable relief for the families of sufferers an essential factor in work remaining to be done in eradicating the disease.

Wants Control for Homeless

Some form of Federal control for homeless, transient tuberculosis sufferers who spread the disease in the communities they visit was urged.

Thousands of homeless men and

women, ill with the "white plague," are a constant menace to healthy communities throughout the country, Dr. Halbert L. Dunn of the U. S. Bureau of the Census, declared.

Arizona, Colorado and New Mexico, meccas for sufferers from tuberculosis, face particularly acute problems in dealing with the disease, Dr. Dunn stated, because of the large number of out-of-state sufferers who flock there.

The Federal control suggestion was made by Dr. H. E. Kleinschmidt, director of health education of the association, and James G. Stone and Zdenka Buben of Los Angeles. The transient problem is complicated. Dr. Kleinschmidt added, because of the difficulty communities have in caring for their own residents.

"The non-resident is scorned and shoved from place to place," he continued. "What communities do not seem to realize is that the tuberculosis wanderer sows the seeds of his disease in countless stable communities.

"The only hope of solution lies in some form of Federal control or cooperation for the footloose patient, who, although he has forfeited his rights of residency, is yet an American citizen."

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PALEONTOLOGY

Earth's Earliest Edens Untroubled by Serpents

S NAKES are a comparatively new thing under the sun. In the Age of Reptiles, that ended only 50 or 60 million years ago, they were almost unknown. Only the last of the dinosaurs, that lived in Cretaceous times, ever had a chance to see snakes, and those were of the earliest models and probably not numerous at that. At least, their fossils are exceedingly rare today.

Data on the relative recency of snakes are included in a new monograph on Fossil Snakes of North America, written by Charles W. Gilmore of the U. S. National Museum and published by the Geological Society of America.

Snakes really began to get down to business on this planet at about the same time that mammals started their long climb to domination. Newcomers together, the snakes and we.

The first snakes were non-poisonous, resembling modern blacksnakes and boas in that respect. Venomous species did not appear, so far as the present record shows, until upper miocene time, roughly from 13 to 18 million years ago. First rattlesnakes began buzzing in the