

ARCHAEOLOGY

Tree Ring Calendar May Date Prehistoric Diseases

USING a calendar of tree rings, complete from the seventh century A. D. down to the present, archaeologist hope to date diseases that plagued prehistoric Americans of the Southwest.

Burial grounds of Southwestern Indians are yielding rich discoveries for an understanding of diseases in America before white men came, says Dr. John H. Provine, assistant professor of archaeology at the University of Arizona, who is studying diseases that marked the bones.

"Reasonably conclusive" diagnosis of seven diseases that troubled American Indians in Arizona has been made, Dr. Provine said. An eighth disease, syphilis, is doubtful, inasmuch as other diseases might have left the perforated palates, thickened long bones and other conditions that suggest this malady.

The moot question of origin of syphilis in the Old World or the New may be settled, said Dr. Provine, by further study of pathological bones in the Southwest, and by careful checking with the tree-ring dating charts developed by Dr. A. E. Douglass, astronomer of the University of Arizona. The charts, which set in sequence annual growth rings of trees representing dates for many centuries, have enabled archaeologists to discover the ages of over 90 pueblos and cliff dwellings. If fragments of wood, associated with burials of diseased Indians, can be dated by matching growth rings to dated rings of the tree-ring calendar, then dates in America's ancient medical history can be established. Syphilis, in particular, is not yet proved to have

existed in America before coming of Europeans.

Among the ancient American diseases diagnosed by Dr. Provine in the bones he has studied are Pott's disease or tuberculosis of the spine; rickets; osteomalacia, a nutrition disorder of adult women resembling rickets; arthritis, and Paget's disease, which distorted the bones, with such deformities as a bowing of the lower leg.

Science News Letter, March 23, 1935

PUBLIC HEALTH

Antitoxin Like Whiskey Improves With Age

PUBLIC indignation was recently aroused over distribution by a Pennsylvania State Health Department official of allegedly "stale" diphtheria antitoxin which was said to have caused the death of at least one child. In the discussions which ensued in the press and over the air, scientific aspects of the situation seem to have been overlooked.

The questions of breach of faith on the part of the health official and of possible collusion between him and the manufacturer of the antitoxin may be left for the courts to decide.

The question of the freshness and potency of the antitoxin can be settled by science.

Samples from the same lot as that alleged to have caused the death of the child and from other lots manufactured by the same laboratory have been examined by the U. S. Public Health Service, which controls the interstate sale

of biological products like diphtheria antitoxin. These samples were found fully potent.

Health officers and physicians throughout the country have since been advised by the federal health service that antitoxin from this laboratory is perfectly safe. The federal health authorities have found no reason to revoke the laboratory's license.

The bogeyman of "stale" antitoxin can also be laid by science.

Freshness is important with most biologicals such as serums and vaccines but not with diphtheria antitoxin. Redating antitoxin after samples of a lot have been tested is accepted practice. There is even an advantage in using antitoxin that is not brand new. In the words of one health officer, diphtheria antitoxin, like whiskey, improves with age.

Experienced physicians prefer to use diphtheria antitoxin that has aged at least one year because the older product, while still able to neutralize the poison that the diphtheria germs are spreading through the body, causes a less severe reaction when given to the patient.

Science News Letter, March 23, 1935

METEOROLOGY

Groundhog No Prophet; Gessed Wrong Again

POOR old Groundhog—he gessed wrong again!

On Feb. 2, Groundhog Day, there was bright weather over most of the country, Weather Bureau records show. Therefore, the Groundhog saw his shadow—or could have, if he had looked. Therefore, the weather should have been wintry for six weeks more.

Was it? It was not! The same Weather Bureau records show that over almost the entire United States the crucial six weeks were mild and balmy, except for a couple of quite ordinary cold snaps. Temperatures were well above normal, especially in the Northwest.

The joke, however, is not on the Groundhog, but on those who believe in him as a weather prophet. Sunny though the weather was on his special day, he did not see his shadow. The reason is that all groundhogs are sound sleepers, continuing their winter naps until well toward the end of March in all except the extreme southern part of the groundhog range. Any one of the furry little animals that is out of his burrow even now is, relatively speaking, a sufferer from insomnia.

Science News Letter, March 23, 1935



SUBSCRIPTION ORDER COUPON



To Science News Letter, 2101 Constitution Avenue, Washington, D. C.

Please start renew my subscription to SCIENCE NEWS LETTER for 2 years, \$7 1 year, \$5

Enclosed find check. Please send bill

Name.....

Street Address.....

City and State.....

Extra postage charges: 50c a year in Canada; 75c a year in foreign countries.