

PUBLIC HEALTH

Trench Mouth Threatens To Be Always With Us

TRENCH mouth, which plagued the doughboys in France, threatens to become one of the diseases that are always with us, or as scientists say, endemic in this country, Dr. Don Chalmers Lyons of Jackson, Mich., declared at the meeting of the Society of Bacteriologists, Pathologists and Allied Workers of Michigan, Ohio and Indiana.

Carriers, that is, persons who have trench mouth without knowing it, and improperly cleaned beverage glasses are the means by which this disease is spreading, Dr. Lyons stated. He quoted impressive figures to show the increase in cases of this disease within recent years.

"In the state of Washington, where it is classed as a common communicable disease and according to law reportable within 24 hours to county and city health officers, there were 7 cases reported in 1931 and 343 in 1934; a tremendous increase from a percentage standpoint," Dr. Lyons said. "Ninety-five cases were reported in Illinois in 1931 and 758 in 1934, or a 700 per cent. increase. Eight hundred and eighty cases were reported in up-state New York in 1931 and 1,733 in 1934, or more than a hundred per cent. increase. One can safely say that if all cases were reported the figures would be even more impressive."

Dr. Lyons and other scientists have ex-

amined glasses as they came back from customers in beverage dispensing establishments and also as they hung on the rack, supposedly clean and ready for use. They found many of the "germs" of trench mouth on the rims of both dirty and clean glasses. Reporting this investigation, Dr. Lyons said that one's chance of getting trench mouth with a glass of beer were one in five.

The chronic stage of the disease is the most important from the public health standpoint, Dr. Lyons said. The organisms or "germs" that cause it are apparently not normally found in the mouth but they may get into the gums and propagate there without causing much discomfort to the patient. The latter does not realize he has the disease, does not have it treated, and unsuspectingly passes on the organisms to susceptible persons, who may then suffer from the acute stage of the disease.

Dr. Lyons gave three measures for checking the spread of trench mouth. These are:

"1. More rigid enforcement of sanitary standards in beverage dispensing establishments.

"2. Better control of Vincent's infection (the scientific name for trench mouth).

"3. Education of the public to demand proper sanitary measures to protect their health."

Science News Letter, February 15, 1936

PHYSICS

New Theory Holds Light To be Electric Rings of Force

A NEW theory explaining the long-baffling problem of the apparent dual nature of light which sometimes acts like a particle and at others like a wave motion has just been reported by Sir Joseph Thomson. (*Nature*, Feb. 8.)

Elderly Sir Joseph, who is known the world over as J. J. Thomson, was elected Fellow of the Royal Society as far back as 1884 and is now head master of Trinity College, Cambridge Univer-

sity. He was awarded the Nobel Prize in physics in 1906.

A photon of light, according to the distinguished scientist, might well be regarded as a ring of electric force travelling at right angles to its plane. It would be like a ring slipping along a cane; the cane serving as the light ray. Sir Joseph now extends this picture of light to consider a photon of light as a series, or train, of such rings.

A quantum of light, he suggests further, would be a train of definite length of these electric rings of force that would be given out by an electron in falling between energy levels in an atom. A train of rings, Sir Joseph indicates, would make possible an explanation of the interference of light.

Science News Letter, February 15, 1936

MEDICINE

Congenital Syphilis Can be Prevented, Specialists Find

CONGENITAL syphilis is practically a preventable disease.

So announced Dr. Harold N. Cole of Cleveland and seven other medical specialists who, under the name of the Cooperative Clinical Group, have studied the pooled records of five large syphilis clinics in the United States to determine the outcome of pregnancy in women treated for syphilis. (*Journal, American Medical Association*, Feb. 8.)

The prevention of congenital syphilis is dependent upon the routine, early and repeated use of the serologic blood test on every expectant mother and on adequate early treatment once the diagnosis of syphilis is made.

The study reported has been conducted through the cooperation of syphilis clinics of Western Reserve University, the Johns Hopkins University, Mayo Clinic, University of Pennsylvania and University of Michigan, assisted by the U. S. Public Health Service and supported by a special fund contributed by an anonymous donor and a grant by the Milbank Memorial fund. Those signing the report with Dr. Cole of Cleveland are Lida J. Usilton, Washington, D. C.; Dr. Joseph Earle Moore, Baltimore; Dr. Paul A. O'Leary, Rochester, Minn.; Dr. John H. Stokes, Philadelphia; Dr. Udo J. Wile, Ann Arbor, Mich.; Dr. Thomas Parran, Jr., Albany, N. Y., and Dr. R. A. Vonderlehr, Washington, D. C.

Among their findings were the following:

1. A positive blood test for syphilis in the mother is a serious matter to the unborn child. Ten times as many syphilitic children were born when the syphilitic mother's blood was positive during pregnancy as when it was negative.

2. The pregnant syphilitic woman was found to tolerate anti-syphilitic treatment as well or better than the syphilitic woman who had not been pregnant since infection.

3. There is evidence that syphilitic

women who habitually abort are capable of producing living, apparently non-syphilitic children when given specific treatment through each pregnancy.

4. Many more non-syphilitic living children were born when anti-syphilitic treatment was begun before the fifth month of pregnancy than when treatment was delayed.

5. If an early syphilis appears late in pregnancy, some treatment begun at

this period and continued until termination of the pregnancy, even though it is only a small amount, will be of value in the production of a living child.

6. Treatment during a preceding pregnancy is insufficient protection for the present pregnancy, even though the syphilitic woman has a negative blood reaction. It is necessary to treat her throughout each pregnancy in order to insure a living non-syphilitic infant.

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worked in New Jersey, Aldo Leopold explained the Wisconsin system, F. B. O'Connell spoke of conditions in Nebraska, from the neighbor state of Iowa came Logan Bennett, and A. L. Clark related developments in Connecticut.

Yellow corn, though not a native plant, seems to be the best thing for bobwhite quail under winter conditions in the West, Prof. Paul L. Errington of Iowa State College told his colleagues. Some weed seeds they eat freely and digest, he said, but such things as sumac fruits and wild-rose hips, often thought of as natural quail food, they resort to only when real starvation threatens. These cut their hunger deaths by about fifty per cent.; but there is little real nutriment in them for the birds.

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WILD LIFE

Are Duck, Bobwhite, Deer On Way to Extinction?

Conference Hears That Even Cottontail Rabbit Is Becoming So Scarce That Replacement Is Needed

EXTINCTION'S shadow hovers hawk-like over America's remaining wildlife. Will mallard and bobwhite, deer and beaver, vanish as passenger pigeon, great auk, and heath hen have vanished?

No, was the emphatic answer given at the first session of field biologists and conservationists, gathered for the first North American Wildlife Conference, held in Washington. Several score of wildlife scientists and wildlife administrators spoke their minds on special problems, in papers presented at sectional sessions.

It might be thought that the prolific cottontail rabbit would be about the last animal to cause conservationists worry by diminishing numbers, yet such is not the case. Although in some states the value of the cottontails shot annually is greater than that of all other game put together, the supply is running low enough, in some localities, to necessitate the spending of thousands of dollars a year for breeding and replacements of these animals, Dr. R. E. Trippensee, professor of wildlife management at Massachusetts State College, informed the meeting.

Wildlife conservation and replenishment is not entirely a matter for Federal and State agencies, spending millions of dollars upon thousands of square miles of land. Every farmer can run his own conservation program, and many thousands of them are already doing it, on a really scientific basis. Sparing brushy timber patches on creek bottoms and

upland, encouraging shrubs and low trees where gullies need to be checked, planting patches of such game feeding crops as milo maize and leaving them for the birds to harvest, are some of the background elements of such farm-wildlife projects. Game thus encouraged becomes a paying crop in the end, under several different cooperative schemes in force in various states.

L. G. MacNamara told how it is

GENERAL SCIENCE

"Circus of Science" Will Tour the Country

A CARAVAN of 28 motor trucks containing exhibits of science in industry is going on tour throughout the country, Alfred P. Sloan, Jr., president of General Motors Corporation, has announced.

Frankly using the idea behind the Chicago Century of Progress, the "circus of science" will bring to leading



SCIENCE JOINS THE CIRCUS

Robert Audet, theatre manager, uses the arts of the stage to bring home the facts of science to the audience attending the "show" of General Motors Parade of Progress.