

POPULATION

Mankind Likened to Lemmings In Blind March to Destruction

Spurt of Human Population Growth in Past 300 Years Like Rapid Multiplication of Lower Mammals

MANKIND joining in a great mass movement toward self-destruction, driven blindly into a war by stern biological forces that it does not understand. That was the mental picture presented to the scientific audience at the meeting of the American Association for the Advancement of Science by Dr. Raymond Pearl, biologist of the Johns Hopkins University.

Studying such lowly creatures as the fruit fly, beetle and even the yeast cell, hundreds of generations of which can be observed during the working lifetime of a single scientist, Dr. Pearl has drawn lessons that apply to higher forms of life, including man himself. The lemming, a lower mammal, demonstrates how blind biological forces drive creatures to multiply until great population pressures are built up and then drive them on to mass suicide. This Arctic animal has great spurts of reproductivity and after the population density has reached a certain limit, starts mass migratory movements. These great marches blindly push on until some obstacle like the sea or a river is reached. There vast hordes of the migrants still push on to their death.

A parallel is found in the rapid spurt of human population growth, Dr. Pearl pointed out. In a minimum of 100,000 years up to the year 1630, man's numbers grew only to 445,000,000. Yet in the 300 years since then, the population has grown to some 2,073,000,000.

"For thousands upon thousands of years the human population of the earth grew slowly, because the conditions necessary to more rapid growth did not exist," Dr. Pearl said. "Then about 300 years ago, the advancement of learning suddenly expanded man's effective universe and has kept on expanding it. There has followed a spurt of population growth of an explosiveness that is seen, when plotted to a proper time scale, to be comparable to that of an epidemic.

"This has produced a density of 40 persons per square mile for every single square mile of the land area of the earth—good, bad, and indifferent land all

counted in. That there are associated with this present density stimuli producing sensations of discomfort seem scarcely open to argument. Can it be honestly denied that, on a world-wide view, unrest is the dominant characteristic of human behavior today? And behavioristically viewed, unrest is surely the cardinal symptom of discomfort.

"Up to this point the parallelism between the two cases seems reasonably evident. Not being a prophet I have no desire to push it further. But I do venture to suggest that it merits thought. Different species react in different ways to similar stimuli, especially in the emotional field.

"One scarcely envisages mankind marching to a watery grave just behind a horde of frantic lemmings. But does anyone find it difficult to conceive of man marching off in the not too distant future to a war? Or to doubt that once well started that war will entangle in its meshes the major portion before it is finished?"

Science News Letter, January 9, 1937

ANTHROPOLOGY

Bones of Ancient Indians Point to Tuberculosis

BONES of three long-dead Indians held the spotlight at the meeting of the American Anthropological Association as the controversy as to whether the tuberculosis germ plagued prehistoric Americans was reopened.

Dr. William A. Ritchie of the Rochester Museum of Arts and Sciences reported finding the three cases which point to presence of tuberculosis in America before white men arrived.

Many scientists have doubted that tuberculosis was an early American disease, Dr. Ritchie said, because the Indian tribes proved so highly susceptible to the germ when they encountered it among European explorers and colonists.

The prehistoric Indians now tentatively diagnosed as tuberculosis cases bear signs of the disease in bones of the hip, spine, or sinus tracts. All three were unearthed in New York State, and

were among the 411 prehistoric Indian skeletons of that state which the archaeologist has studied to add to knowledge of diseases of the Indians.

Arthritis, chiefly in the leg joints and spine, was the commonest bone ailment that attacked these Indian groups, he has found.

Modern Life Not So Bad

Don't blame modern civilization too much for aches and diseases. Bones unearthed in a city of 3000 to 1500 B. C. reveal that life was harder then on the human frame than it is today.

Pointing out this moral from his study of what an entire population was like at Tepe Hissar, Persia, Dr. W. M. Krogman of Western Reserve University said that arthritis plagued more than one adult in four in the ancient city. From the skeletal material, the people appear to have suffered from tuberculosis, varicose ulcers, poor nutrition, impacted wisdom teeth, broken bones, and other troubles. He also found two surprising instances of what may be syphilis, already plaguing mankind in so early an era.

Science News Letter, January 9, 1937

BIOLOGY

Blue Stain in Cotton Traced to Cause in Fungus

BLUE stain in cotton, which sometimes causes serious loss in market value of the staple, has been traced to its cause by O. P. Owens of North Carolina State College. The guilty organism is a fungus, belonging to a large tribe of vegetable criminals that bears the generic name *Alternaria*. Pure cultures of the fungus planted on sterile mature cotton fibers repeatedly produced the damaging blue color.

Science News Letter, January 9, 1937

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