

PUBLIC HEALTH

Many Lives Saved By Care Of Mothers and Babies

OVER a hundred lives were saved in one Tennessee county during a five-year period as a result of adequate attention given to the health of mothers and children, it appears from the Commonwealth Fund's report of activities for the past year.

These hundred or more lives saved would have been taken by the various preventable diseases, such as diphtheria, smallpox, and the like, the Fund's officers found by comparing the country's record of deaths from these diseases during the periods 1924-28 and 1929-33. Since 1924 the Fund has been aiding public health and medical development in Rutherford county. During the past five years the county has maintained its own health department. Striking reduction in the number of deaths of mothers in childbirth and of children under two years of age has also been recorded during this period.

Improvement of medical and public health facilities in rural areas is one of the scientific activities aided by the Fund.

Science News Letter, January 26, 1935

GENERAL SCIENCE

Asks "Cut" of Athletic Funds for Research

RESearch in science should have at least a modest slice of the funds now lavished on athletics in universities, Dr. John M. Cooper of the Catholic University of America proposed. A "cut" of ten per cent. of the athletics budget, he suggested, would not be too much to be diverted to the support of research. Dr. Cooper laid his proposal before a round-table gathering of Catholic scientists attending the meetings of the American Association for the Advancement of Science.

"Notwithstanding our hard times, nearly all our colleges and universities manage to find fairly generous funds for intercollegiate athletics," Dr. Cooper said. "Only exceptionally are these large expenditures covered from gate receipts.

"Would not the real objectives of our institutions of learning be better attained if even ten per cent. of the money now being sunk annually in intercollegiate sports were shifted from

the athletic budget to a research budget?"

"Even \$2,000 a year taken from a \$20,000 athletic budget would provide grants in aid to departments and staff members for four or five modest research projects. Forty or fifty such projects completed and published in a ten-year period would, many of us believe, do more to draw desirable students and to gain academic status than twice as many brilliant victories by 'muddied oafs at the goals.'

"The supporting public in general and students in particular are more and more demanding, since the close of the jazz age, that academic shoemakers stick to their lasts, and that they sell shoes that wear, without embroidered shoelaces."

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PHYSIOLOGY

Hunger Gets Less as Time Between Meals Increases

HUNGER is often more pronounced just before a regular meal than after a fast of 24 hours or more, Dr. Robert N. Sanford found in research at the Harvard University psychological laboratories.

Observing the reactions of the human mind under various degrees of hunger, he found that the "food habit," food appetite, and biological requirements of the body in many cases were more important factors than the passage of time in determining a subject's attitude toward food.

According to the results of his experiments on more than 300 students, the passage of a long period of time tends to decrease rather than increase hunger, with most acute hunger present just before a regular meal. Two hours after the meal hunger decreases about 50 per cent., he found, and even from eight to 24 hours after eating, food interest is still less than just before a scheduled repast.

A group of 27 students voluntarily fasted for 24 hours, and although most of them showed considerable hunger, some showed extremely little food interest. These stated that even consciously, they felt little attraction for food, a result which corresponds to the fact that most people lose hunger in a prolonged fast, and that hunger does not affect some, even in a relatively short period of abstinence.

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IN SCIENCE

ENTOMOLOGY

Mosquitoes Lay Eggs Without Eating Blood

BLOODTHIRSTINESS on the part of the female mosquito is usually accounted for by the claim that she cannot lay her eggs without at least one rich meal of human or animal blood. This belief is now contested by several investigators, the most recent of whom are J. F. Marshall and J. Staley, of the British Mosquito Control Institute, (*Nature, Jan. 5*).

They have found it possible to breed one of the commonest and most troublesome of mosquito species on a no-blood regimen, by keeping well-warmed the water in which their "wigglers" or larvae grow, and supplying the larvae with a copious diet.

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VITAL STATISTICS

Birthrate Decline Is World-Wide

WORLD-wide decline in birthrate, with a much sharper than average fall in the United States, is seen by statisticians of the Metropolitan Life Insurance Company. While the fall has been going on for more than half a century, it has become much more rapid in the last five years.

Rumania is the only country with any sign of a rising birthrate since 1928, but the rise is slight and may not be real, since birth registration has improved greatly in Rumania in recent years. Chile had the largest drop in birthrate, Venezuela had the smallest. In 1932 only 9 of the 37 countries studied had lower birthrates than the United States. The French birthrate is no longer declining rapidly and in fact exceeds the German rate.

A decreasing birthrate means an ever decreasing proportion of youth and vigor in the population, the statisticians point out, with the old and dependent forming a larger part.

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CE FIELDS

SEISMOLOGY

Grand Canyon Region Shaken by Local Quake

GRAND Canyon National Park has experienced since the first of the year a series of local earthquakes, some of them severe enough to awaken sleepers and break windows.

The local disturbance is probably confined to the Bright Angel geologic fault which crosses the Grand Canyon. The country west of the escarpment is known for an earthquake region for fifty miles. The Grand Canyon area, however, cannot be counted as a major seismic region, since recorded shocks have not been destructive. The quakes of the recent past have been the first in twenty years. Two others recalled by old-timers occurred in 1904 and 1914.

The Grand Canyon earthquakes, present and past, have had practically nothing to do with the formation of the Grand Canyon itself. A remark often heard from awe-stricken visitors is, "What a tremendous upheaval in nature it must have taken to create this great gash in the earth!" In point of fact, the Grand Canyon was formed very slowly and very quietly. Every inch of its mile of depth was worn by the water of the Colorado River, rolling rocks and pebbles along its bottom, through many hundreds of thousands of years. The slow rising of the Arizona plateau was no doubt accompanied by many earthquakes; but it was the river, and only the river, that carved the Grand Canyon of Arizona.

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ARCHAEOLOGY

Rickets May Have Ruined First New World Colony

THE New World, discovered and colonized by Europe five hundred years before Columbus, was lost again because of rickets, modern archaeological excavations in Greenland suggest.

At Herjolfsnes, on the lonely Greenland coast, several skeletons of Viking women, disinterred and studied by Prof. F. C. C. Hansen of Copenhagen, ex-

hibit severe pelvic deformations. The abnormalities are due to osteomalacia, (rickets in its severe form), according to Dr. J. Preston Maxwell, British physician and professor of gynecology at the Union Medical College at Peiping, China. By inhibiting reproduction among the settlers, this disease changed the course of history, Dr. Maxwell suggests. (*American Anthropologist*, July-September, 1934)

The Greenland colony was founded in 985 A.D., by Eric the Red. It was Eric's son, Leif the Lucky, who discovered "Vinland," thought to have been perhaps Massachusetts.

The Greenland settlements lasted five centuries. An independent state at first, they finally became a Norse colony. Scandinavian ships maintained a busy commerce there, trading European wares for New World walrus ivory. Great stone churches were erected; cattle were imported; and new local industry began.

Clothing styles dug up by archaeologists in Herjolfsnes show how close and continuous the European contact was for a while. Then, at last, for some mysterious cause, decline set in. The population died. Houses fell into ruin. Grass and willow grew over them. Finally Eskimos settled at the sites. The Norse ships stopped coming, no one knows when, or why.

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CONSERVATION

Ducks Scarce in Mexico, U. S. Scientists Learn

WILD ducks are scarce in Mexico, no less than in this country. Investigators of the U. S. Biological Survey, who are studying certain duck species that nest in the United States and Canada and winter in Mexico, have learned from Mexican sportsmen, as well as from their own observation, that the serious duck shortage felt for some years in this country has its close reflection in our next-door neighbor on the south.

One substantial step in the conservation of wildfowl has been taken by the Mexican government. For many years Mexican pot-hunters have made use of a device known as an "armada"—a whole battery of shotguns mounted on a frame, aimed and fired as a single weapon. One broadside from this murder-machine could wipe out hundreds of ducks. The use of the "armada" is now forbidden.

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METEOROLOGY

Dust Storm Menace Looms, Weather Bureau Warns

DUST STORMS, choking the air and blinding the sun, may come whirling out of the Northwest at any time, the U. S. Weather Bureau warns. The soil throughout the drier western part of the Great Plains region, from eastern Montana and the western Dakotas down to eastern Colorado and western Nebraska, is still in a state of unbelieved drought, and bare of snow.

Whether such storms might repeat the performance of the famous dust storm of last spring, which swept across the entire East and reached the sea, Weather Bureau scientists would not venture a prediction.

The one thing that might prevent the menace of dust storms in the West, said J. B. Kincer, Bureau meteorologist, is timely rain or snow. But there is little expectation of that in the Western dry area now until March or early April.

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ECOLOGY

Plants Moved to Mountains Don't Become New Species

RADICAL changes in dwelling-place do not force plants into correspondingly radical changes in form. Plants carried from mountain-top to sea-level, or vice versa, do change their appearance but they do not change their identity, Dr. David D. Keck of the Carnegie Institution of Washington, told a botanical audience at the meeting of the American Association for the Advancement of Science.

The experiments were carried out between California mountain tops and the sea, and were undertaken partly with the objective of finding out whether plants carried to altitudes quite alien to them in nature would respond by turning into new species. Such proved not to be the case. The plants underwent modifications in external form and internal structure that were frequently striking and remarkable, but such changes did not become permanently incorporated into their hereditary make-up, and when they or their descendants were transplanted back to the original environment the changes were soon reversed, leaving the plants in their original state.

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