



RECENT VISITOR

This iron fragment from the Canyon Diablo meteorite, which crashed to earth in geologically recent time, and was probably seen to fall by Indians, is about 100,000,000 years old, according to evidence given by the radium, helium and lead it contains.

ments, such as sandstone or shale. The iron meteorites resemble the earth's interior as it has been described by geophysicists, whose instruments tell them facts about places they will never see.

Comets, when they cool and compact into large masses from clouds of luminous dust, are the source of meteorites, according to another theory. Some geologists believe that meteorites do not come from the solar system at all, but that they are wanderers from outer space, attracted into the solar system by the sun's pull, and only incidentally pulled to earth. The new age figures do not solve the riddle of the meteorites, but only show that they are of widely differing ages.

Science News Letter, April 2, 1938

PUBLIC HEALTH

Urges Useful Employment As Mental Health Measure

USEFUL employment—with emphasis on the useful—for all who are able and willing to work was urged as a public health measure by Surgeon General Thomas Parran of the U. S. Public Health Service.

Speaking "as a doctor" before a Senate committee to investigate unemployment and relief, Dr. Parran said:

"Whatever the cost, I would urge that from the standpoint of public health, in its larger concept—of mental health—economic factors are subordinate to the vital necessity of providing for our destitute citizens an opportunity of a livelihood earned by individual effort.

"We cannot for long years and perhaps generations repair losses to human character and mental health which will result from a failure to give useful employment to our citizens."

The vicious circle of poverty-disease-poverty can best be broken, Dr. Parran said, "by doing what we know how to do to improve the health of the underprivileged groups."

He cited figures from the recent Public Health Service survey showing that there is much more illness among the unemployed and much less medical care than among those in more comfortable economic circumstances, and that disease is a large factor in unemployment and unemployability.

Unemployment and economic worry were among the factors causing mental illness and breakdown in as high as one-fourth of first admissions to mental disease hospitals during depression years,

according to hospital superintendents' estimates.

Illness and death due to tuberculosis, syphilis, pneumonia and cancer could be greatly reduced, Dr. Parran said, by applying present knowledge to all classes of the population.

Death rates from tuberculosis among the unemployed are now as high as they were for the entire population in 1900. The reduction in the general tuberculosis death rate during the years since 1900 hides the high death rate among lower economic groups.

Science News Letter, April 2, 1938

PUBLIC HEALTH

Peak of Measles Epidemic Not Due For Three Weeks

THE MEASLES epidemic slacked off a bit during the week ending March 19, figures just received at the U. S. Public Health Service show. For this last week the total number of cases, exclusive of Iowa which has not yet reported, was 43,489. This is about 300 cases less than the previous week.

Health authorities do not think the peak of the epidemic has been reached yet, however. Charts of measles reports for the past 9 years show that the totals go up to a high point, then drop slightly for a week and then rise again to the final peak. Only exception to this in 9 years was in 1935 when the peak was reached on March 30. Other peaks usually come about the middle or end of April, after which the epidemic dies out.

That peak week of March 30, 1935, saw the largest number of cases ever reported for a single week, over 35,000.

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ORCHIDS FOR YOU—Dr. David Lumsden of the U. S. Department of Agriculture.

April 14, 4:00 p. m., E.S.T.

LOST ARTS OF THE STONE AGE—Dr. H. C. Shetrone, Director of the Ohio State Museum.

In the Science Service series of radio discussions led by Watson Davis, Director, over the Columbia Broadcasting System.

The year 1934, however, had a larger total for the season—242,925 cases for the first 11 weeks of the year. This is the eleventh week of the current year and the total number of measles cases was 330,178.

The number of measles cases reported in Chicago so far this year tops all previous yearly records, the Chicago Board of Health announced. On March 17 the year's total had reached 24,363 cases. Previous record was 24,199 cases during the year 1935. An all-time daily record was set on March 10 with 743 new cases reported in that one day.

Science News Letter, April 2, 1938

NATURAL HISTORY

Tree Grove is Leading Character in New Book

A PRAIRIE grove is the principal character in a new book by Donald Culross Peattie. Books without end have been written that purport to report the world as seen through the eyes of animals. Here is one that uses a natural group of trees as its vantage-point.

Not that the trees are personalized; Peattie is far too clever a writer for that. The grove, one of those "islands" in the primeval prairie's sea of grass that for ages afforded harborage to men and beasts, is simply shown for what it was, a focus for the biota (including the human) of the region round about.

Here came the French: the typical team of the adventurous *sieur* following a dream of empire and the equally vision-inspired priest seeking an empire of souls. Here they wrought among the Indians, until death ended ambition and rewarded zeal. Here the Indians came and went, as the movements of their migratory larder, the bison herds, gave leave and command.

For many years, the long, unrecorded interregnum between French and American pioneers, the grove knew only these bison-following Indians. Even the first white migrants into the region missed it, because they shunned the prairies and would farm only after clearing the timbered bottomlands.

Then at last, on creaking inexorable wheels, the descendants of New Englanders moved in, to found the biotic complex that now dominates the upland prairies. Indian, prairie grass, and bison have gone; American, corn, and cattle have taken the land. The prairie grove, the island of trees, has stood and witnessed it all.

Science News Letter, April 2, 1938

MEDICINE

Yellow Fever Weapon Developed Just in Time

SUCCESSFUL vaccination against jungle yellow fever on a large scale has been achieved by means of a new vaccine developed in the laboratories of the Rockefeller foundation. More than 38,000 persons in Brazil and some 2,000 in Colombia have already been vaccinated, Dr. Raymond Fosdick, president of the Rockefeller Foundation, announced.

Success of the new vaccine is particularly significant because of three recent and upsetting developments: 1. Yellow fever is prevalent in vast areas of the hinterland of both South America and Africa. 2. It can be carried by insects other than the ordinary yellow fever mosquito, but the other carriers have not yet been discovered. 3. Expansion of rapid air travel has brought the yellow fever areas close to regions that considered themselves safe from this disease.

All this means that ordinary methods of fighting yellow fever, which succeeded in wiping out the disease in the United States and many other places, cannot be successfully applied in the case of jungle yellow fever. The only hope of preventing the spread of jungle yellow fever to cities and countries now free of it lies, for the present, in the vaccination of exposed populations and of air crews and passengers.

This now appears possible by means of the new vaccine. This vaccine is made from yellow fever virus developed by tissue culture methods. Reaction to it is mild, consisting chiefly of a slight headache 6 or 7 days after vaccination. Results on 700 persons previously inoculated with living yellow fever virus gave full or partial immunity or protection in over 99 per cent. of the cases.

Science News Letter, April 2, 1938

BIOCHEMISTRY

Viruses, Declared Non-Living, Show Some Signs of Life

SUBMICROSCOPIC particles of proteins that cause the virus diseases of plants and animals are again the subject of discussion: are they alive or not?

For a long time they were considered to be "living molecules." Then they were assigned to the non-living realm, especially as the result of researches in the last couple of years at the Rockefeller Institute laboratories at Princeton, N. J.

Now, Drs. T. E. Rawlins and William N. Takahashi of the University of California indicate several points in which these elusive filter-passing substances persist in acting as though they were alive. (*Science*, March 18)

One suggestion that they may be living is found in the way they refract or bend light. A similar refraction is produced by living substance in the heads of sperms or male sex cells—which are undoubtedly living objects.

Another point is raised over the chemical nature of the viruses. They are now

commonly considered to be enzymes, yet they consist of nucleoproteins. Nucleoproteins are proteins found characteristically in the nuclei of living cells, and not in ordinary enzymes.

Drs. Rawlins and Takahashi also call attention to the enormous molecular weights of the virus proteins. These are figured in the millions, very much higher than the molecular weights of known enzymes. They suggest therefore that instead of being single molecules the virus particles may be aggregates of molecules—another hint that they may be alive after all.

Drs. Rawlins and Takahashi avoid categorical declarations. They state:

"It is obvious that much of the above speculation is based on meager evidence; it is presented with the hope that it may stimulate further research in this field rather than that it may enable the reader to reach a conclusion regarding the nature of viruses."

Science News Letter, April 2, 1938