

SCIENCE NEWS

TELEGRAPHIC REPORTS TO THE DAILY PRESS ON THE WASHINGTON MEETING

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THE necessity for conserving our seemingly inexhaustible natural resources and making them last as long as possible through scientific research was the keynote of the address of the retiring president of the American Association for the Advancement of Science, Dr. Charles D. Walcott, secretary of the Smithsonian Institution. "The cream has been skimmed and all too often the milk has been thrown away," he said in stressing the fact that our natural wealth has been exploited in the past on the theory of making maximum profits for the exploiter. Dr. Walcott also condemned those whom he termed "sciosophists" and described them as "the apostles of organized ignorance who reject all evidence without attempting to prove or disprove and who condemn the exceptional mind that was compelled by an inner urge to attempt to penetrate into the mists that conceal the unknown."

As if in response to this indictment, a sharply worded resolution was passed by the American Association for University Professors meeting in conjunction with the American Association. "For any state to pass laws against the teaching of evolution is unconstitutional," the resolution stated, "as it is a direct infringement on free speech, based on groundless fear and ignorance." This is a protest against efforts in certain states to legislate the teaching of evolution out of university curriculums, and the dismissal of teachers for expressing their views on the subject. The association went on record as opposed to the determination of disputed questions of scientific fact by popular vote or by the activities of minority groups rather than by the teachers and investigators who have made specialties of their respective subjects. They advanced the argument that "if those who know most about a subject sometimes decide wrongly, matters are not likely to be mended by putting the decision into the hands of those who know less."

PROFESSOR BOAS denounced classification of immigrants according to "races" as meaningless from a biological standpoint. The notion that because a person is a Swede or an Italian he has certain racial characteristics shared by others of the same nationality, he declared, is entirely erroneous. All so-called "races" are extremely mixed people and the race must not be considered a unit but a conglomeration of many family groups. In designing tests for immigrants the fact that individuals in certain areas with the same language, customs, and habits act differently from those in other cultural areas must be taken into consideration. Before the validity of any test can be determined, he pointed out, there must be a thorough investigation of the degree

of assimilation of immigrants from such regions at different periods after they are admitted.

Making immigrants pass tests for admission to the country just as prospective college students must take entrance examinations was proposed by Professor R. S. Woodworth, psychologist of the National Research Council.

A NEW ductless gland extract, taken from the parathyroid gland of the throat may prove to be a medical discovery of the same order of importance as insulin. Dr. J. B. Collip, of the University of Alberta, told of his researches on the control of calcium in the blood before the American Physiological Society. Previous workers had suspected that the parathyroid gland was the center of control of the calcium in the blood, for children with stunted parathyroids suffered from diseases due to lack of calcium, and calcium salts administered as medicine relieved them. Dr. Collip, however, has removed all doubt about the matter, for with a parathyroid extract which he has prepared he is able to cure the same diseases, and that without giving any additional calcium. "I am confident that I have located the active principle of this gland," said Dr. Collip. "Its effect on the human body is just as positive, and just as controllable, as is the effect of insulin."

A TREATMENT for angina pectoris, described at a meeting of the American Society for Pharmacology by Dr. D. E. Jackson, of the University of Cincinnati Medical College, promises to be more than a ray of hope for sufferers from this serious and frequently fatal disease of the heart. Administration of adrenalin by mouth forestalls the periodic pain without surgical measures and seems to effect a permanent cure. In any event no harm can result. At present, the cause of angina pectoris is unknown. It seizes its victims at periodic intervals with a violent pain in the region of the heart, which radiates down the left arm. Two treatments have been applied in the past. One, the more effective, requires the inhalation of amyl nitrite. When a sufferer breathes this easily vaporized liquid, a spasm subsides, but the same steps must be taken to subdue each of the frequent attacks, and the relief is in no sense permanent. Surgery has aided in the last few years, because it was found that if the cervical sympathetic nerves in the neck are removed, the pains may be stopped. Unfortunately, however, this measure is not always successful.

THOUSANDS of universes, each similar to the lens-shaped group of stars of which our sun is an insignificant member, with the nearest so distant that before it reaches us its light travels for a million years at a speed which would circle the earth seven times in a single second, have been shown to exist by Dr. Edwin P. Hubble, of the Mt. Wilson Observatory. His work, done with the great Mt. Wilson reflecting telescope, the largest in the world, was described to the American Association for

the Advancement of Science by Professor Henry Harris Russell, of Princeton.

These universes appear through telescopes as clouds of light, more or less circular, and with a spiral structure. By means of stars in them that undergo a peculiar periodic variation in light, the distance of a few of them has been determined, and, in the opinion of Dr. Harlow Shapley, director of the Harvard College Observatory, this proves the theory that they are "island universes" entirely outside our system. Previously, with a majority of astronomers, Dr. Shapley has been the most prominent opponent of this theory, and his admission of its probable truth is hailed with delight by its advocates.

WORLDS in the process of creation in the lightless spaces of the sky where no star ever shines; worlds that are as yet but cosmic dust, pushed about by tides of light; worlds that will not come into being for trillions of years; worlds that will require almost endless time before they evolve life; microorganisms drifting about dormant in the awful cold of the space between the stars, waiting for a world on which they can settle. These were some of the fascinating speculations presented by Dr. J. C. Merriam, president of the Carnegie Institution of Washington, before the American Association for the Advancement of Science.

There need be no concern about there not being time enough for evolutionary processes, Dr. Merriam said. New concepts and discoveries in physics, chemistry and astronomy have lengthened the estimated life of a stellar universe from a mere ten or twenty million years to a hundred or possibly a thousand times that period.

Nor need there be any anxiety over there being too few changes in the face of the earth to allow evolution to take place. The flexible crust of the earth permits all sorts of mountain-folding and continent-making, and this results in the alternating isolation and mixing of species that allow the development of new life forms.

As an illustration of the way changes can take place literally beneath our very noses, in the apparently solid rocks, Dr. Merriam cited exact surveys made in California by the Navy and the U. S. Coast and Geodetic Survey. By comparison with earlier determinations, it was shown that there have been drifts in the position of solid mountain masses during a very brief period of thirty years, of as much as twenty-six feet. Dr. Merriam mentioned a theory held by some geologists that South America and South Africa were once parts of the same continent, and that they had literally drifted apart. He does not believe in the theory himself, he stated, but there can be no objection to it on the score of time, for the new physico-astronomical views allow time enough for the two continents to drift around the earth twice in opposite directions, passing each other on the way.

HELIUM, one of the most exclusive of all the chemical elements, has been made slightly more gregarious, by Professor Karl T. Compton, of Princeton, who has persuaded this inert light gas, first discovered in the sun and now used to float dirigibles, to combine with mer-

cury. He explained to the chemists how the world's first helium compound was formed in a vacuum tube when mercury vapor was activated by ultra-violet light. The name "mercury helide" has been suggested for the new compound.

WHETHER the powerful X-rays can be diverted in their course by the substances through which they pass has been an undecided question. Physicists were interested therefore in the announcement made by Prof. Manne Siegbahn, of Sweden, that he has been able to prove that X-rays are refracted by solids.

THE possibility of seeing millions of stars now beyond the power of the largest telescopes was presented to astronomers by Dr. Heber D. Curtis, of Allegheny Observatory, Pittsburgh. The perfection of photographic plates with speed one hundred times those now in use would have the same practical effect as if the great 36" telescope of the Lick Observatory were replaced with one with a lens 30 feet in diameter. There is also a great future in the use of the photo-electric cell, a device which measures small amounts of light by converting them into electric currents, and, he continued, "it will be very strange if the wonderful delicacy of the vacuum tube is not soon utilized in astronomical research."

THAT life is possible on Mars was stated by Dr. W. W. Coblentz, who told of his work last summer in conjunction with Dr. C. O. Lampland, at the Lowell Observatory in Arizona to determine the surface temperature of the ruddy planet. At noonday, in summer, on the equator, the temperature rises as high as 40 to 60 degrees Fahrenheit. During the night, it may drop to as low as 100 degrees below zero, so that if any life exists on this part of the planet, it would probably be capable of burrowing deep into the ground to withstand this nocturnal cold. On the other hand, the north and south poles, while the maximum temperature is much less, has a day 8 to 12 months long, and consequently it might be that some form of life which can stand low temperatures may exist there. While these determinations show low temperatures, Dr. Coblentz pointed out that his was the first work that has demonstrated that the Martian temperature ever rises above the freezing point of water, a condition that many astronomers have held impossible.

Do not wink when you are aiming a gun, if you want to hit the thing you are aiming at was the advice of Professor W. R. Miles, University of California, to members of the American Physiological Society. This is because every time you wink whether consciously or not, the eyeball itself shoots upwards with lightning speed, and the lids have a circular wiping movement which removes particles of grit and dust to the corner of the eye. Professor Miles discovered this eye-reflex while studying eye movements during the reading of Chinese written vertically and horizontally.