

SCIENCE NEWS

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RACE MIXTURE

FAST transportation that has carried civilized peoples into the remote corners of the earth is bringing about problems of race mixture such as have never existed before in the history of mankind. The potential dangers of European stock settling among primitive races were pointed out by Dr. Charles B. Davenport, of the Genetics Laboratory of the Carnegie Institution of Washington, at the International Congress of Anthropologists in session at Amsterdam.

It is not strange, Dr. Davenport stated, that statesmen, biologists and eugenists are asking what the consequences of such race crossing are likely to be. The question is raised whether it should be welcomed as tending to produce higher types or whether steps should be taken to prevent immigration to any country as a menace to its culture.

Each race that has persisted a long time in a distinct environment, the eugenics authority explained, has certain adaptations to that environment. In the mixture of races now taking place there are combinations of conditions which sometimes lead to disharmony from the conflict of developmental tendencies.

"Thus," he continued, "in America we have a union of races, characterized by large teeth in large jaws, with others having small teeth in small jaws. It has been suggested by orthodontists, specialists who correct irregular teeth, that a combination of an hereditary tendency to large teeth, combined with hereditary small jaws produces the crowding of teeth which has made orthodontia so important a branch of medicine in the United States. Such crowded jaws are in striking contrast with the uniform dental arcades that one sees in comparatively unmixed, primitive peoples.

"Mental and temperamental incompatibilities may also arise, as we see in the mulattoes of North America, which combine something of a white man's intelligence and ambition with an insufficient intelligence to realize that ambition. This leads in the hybrid to dissatisfaction and a feeling that he is not getting a fair deal."

The mixed progeny of the Chinese and the Hawaiians in the Hawaiian Islands stand first among all hybrids in industry and self support, in Dr. Davenport's estimation. They have the intelligence of the Chinese with the well-stabilized, docile and patient temperament of the Polynesian. Another comparatively successful cross is among the Dutch settlers and the natives of Java and Sumatra. These hybrids are often possessed of great physical beauty and high intelligence.

It is difficult to arrive at a dispassionate scientific analysis of the consequences of human hybridity, Dr. Davenport stated, because the subject is one that arouses emotional bias. The result of race crossing, he affirmed, depends on the particular nature of the cross.

"In the absence of any uniform rule as to consequences of race crossing it is well to discourage it, except in those

cases where, as in the Hawaiian-Chinese cross, it clearly produces superior progeny. The Negro-white and Filipino-European crosses seem, on the whole, socially inferior to the parent races."

EVIDENCES OF EARLY MAN IN AMERICA

CLAIMS that primitive man inhabited America at a time vastly earlier than hitherto supposed have received substantiation through the visit of Dr. O. P. Hay, of the U. S. National Museum, Smithsonian Institution, to the gravel pits at Frederick, Okla., where were recently discovered well-made flint arrowheads and other artifacts in association with skeletons of animals that lived during the early part of the glacial epoch.

Acceptance of such antiquity for man in America will not only upset the prevailing notions as to human history in the western hemisphere but will date ancient man in America earlier than the famed Neanderthal and Cro-Magnon men of Europe.

The new evidences of early man in America were unearthed, studied and reported by J. D. Figgins and Harold J. Cook, of the Museum of Natural History, Denver. Dr. Hay's trip was made to inspect the site and the circumstances surrounding the excavations. Dr. Hay is regarded as the leading authority on the animals of the geological period, called the Pleistocene, which just preceded the present. The question of the existence of early man in America has long been one of controversy in scientific circles, many anthropologists being unwilling to believe that America was inhabited before the Indians who emigrated here from Asia not more than 25,000 years ago according to some authorities.

"I feel that those who go to Frederick and see for themselves will have no doubt as to the authenticity of these evidences of early man in America," Dr. Hay said. "Those who believe that man has existed on this continent for only a few thousand years should investigate this case and give us their explanation of it."

SHELLS USED AS CURRENCY

In the days before the white man with his gold and silver currency invaded the northern part of California, the tribes known as the Tolowa, Karok, Yurok and Hupa had a well-defined monetary system established, the principal medium of exchange being the peculiarly shaped, long, white, curving dentalium or tusk shells.

Recently there came to the Museum of the American-Indian Heye Foundation several strings of this shell money. In the period of American occupancy of California immediately after the gold rush and up until the late 80's, this odd currency circulated among the Indians and whites as well. To-day, although new, undecorated shells of the ordinary or "woman's dentalia" are quite common, the longer, quaintly ornamented shells are becoming scarcer and scarcer and it is only when some aged Indian, pressed by the high cost of living and impor-

tuned by his younger and more modern relatives, reluctantly parts with his symbol of wealth, that the old-time money comes to light.

In primitive times, the dentalium shells used as money were from one and seven eighths to two and one half inches in length. The longest shells were valued at \$5 each, the shortest between twenty-five and fifty cents. The shells were strung on leather or sinew cords, eleven to fifteen shells being the general length of the strings. The eleven-shell string was the most valuable and allowing for fluctuation and method of measurements was roughly valued at \$50.

In measuring an individual shell, the units of measure were the fingers. The longest shells were placed on the little finger and a shell to be of the utmost value should reach from the farther crease of the little finger to the fold of the palm below. Other sizes were matched against the middle finger. In some cases men had their forearms tattooed with a series of marks whereby whole strings could be measured.

Currency of this sort was in demand and the owners treasured it above all else. The majority of such odd "coins" were often profusely decorated with incised lines or wrapped with thin spirals of snake skin. Occasionally woodpecker scalps would be tied in small tufts to the precious things. In order to keep the "otlwetsik" or "human beings their dentalium," as it was called by the Yuroks, safe from harm, the California financiers carried their wealth in purses made of elk horn, hollowed out and decorated with incised geometric designs.

Strangely enough, the tribes that prized the shell currency the most highly were not the ones who took it from the ocean bed. The dentalia in olden times were fished from sand bars off the mouths of northern rivers by Indians inhabiting Vancouver Island, the northern coast of Oregon and British Columbia. The shells were traded southward and after passing through several hands finally arrived in the California country, where they were eagerly received.

With such wealth the tribal magnates bought houses and canoes, wives and clothing, furs, obsidian blades, woodpecker scalps, tobacco, etc. The obsidian blades, huge things often two and a half feet long and five inches and more in width, of both black and red obsidian, and the brilliant red top knots of the common woodpecker were also deemed units of wealth. Even to-day these objects are held above all other items of native manufacture or use. The albino or white deer skin is likewise considered a rare treasure and when a man can display such a skin in the "White Deerskin" dance along with one or more obsidian blades and a headband of red-headed woodpecker scalps, he is indeed a plutocrat.

THE EUROPEAN BISON

THE wisent, European cousin of the American buffalo or bison, is to-day in far greater danger of being exterminated than the bison was a generation ago, after the great slaughter of the eighties. Before the war they were reduced to two moderate-sized herds in Russia and scattered smaller groups elsewhere; and counts taken since then have shown that the great cataclysm almost destroyed the species.

Before the war the wisent was found in the great forest of Bialowies, Lithuania, then a hunting preserve of the Czar. In 1914 there were here about 800 animals, which had been so carefully attended that they had practically ceased to be wild.

The second herd, of about 700 head, lived in the Kuban district of Caucasia, in great preserves belonging to the Russian Crown. These were still fairly wild and had not been pampered, as those in Bialowies had been.

Lastly, there were some seventy animals on the estates of Prince Pless in Upper Silesia, then a part of Prussia. There were also scattered all over Europe perhaps 75 more, in zoological gardens and on private estates.

By the end of the war, in 1918, the Bialowies wisents had been exterminated. Of the Caucasian herd, according to reports from the Soviet authorities, about 25 are left, which are protected as far as possible. The Pless herd has been reduced to 3 head.

In order to preserve what was left of the wisent in Europe, the International Society for the Preservation of the Wisent was founded in August, 1923. At that time there were only fifty-six wisent left in Europe.

A census, taken in December, 1925, showed 69 head, 36 male and 33 female, while during 1925 twelve calves had been born.

The year 1926 was the most unfortunate for the wisent. The herd of Herr von Beyme, at Scharbow, Mecklenburg, six animals, fell victims to hoof-and-mouth disease. There was a decrease in the number of calves born, eight as compared with twelve in 1925; and finally records and careful examination have shown that the whole herd of wisent in Hungary and several of those in Sweden and Copenhagen are not pure blooded. Thirteen animals, six bulls and seven cows, must be therefore removed from the registry of pure stock.

The final result is that there are 21 bulls, 20 cows and 11 calves born since January, 1925, a total of 27 bulls and 25 cows, or 52 animals, as against 56 at the time of the foundation of the Wisent Society in 1923.

The Soviet Government has been exploring the 965 square miles of the Kuban region in Caucasia and investigating the status of the wisent there, but so far no report has been made available.

THE RED WOLF OF TEXAS

THE red wolf of Texas, despoiler extraordinary of sheep, goats and poultry, has caused so many thousands of dollars' worth of damage during the past eight months, that government wolf experts are conducting a ruthless warfare against him.

Central Texas counties in particular are bending their efforts towards quick elimination of the pest. In Parker County alone, it is estimated that annually the red wolf destroys from \$25,000 to \$35,000 worth of animals. The chamber of commerce has found it necessary to put up dollar for dollar with the people in the rural districts, employing two government hunters, who, in the eight-month period, managed to kill more than a hundred wolves.

Like his cousin, the notorious gray wolf of the western plains, expert killer of calves, which has been virtually stamped out in the West, the red wolf is primarily a lone

despoiler. His habit is to venture forth at night, sweeping down upon farm and ranch, killing his prey and then hastening to his out-of-the-way retreat to sleep away his food debauch.

The Texas red wolf ranges in weight from 30 to 60 pounds, while the gray wolf, known in Texas as the lobo or timber wolf, ranges between 75 and 100 pounds. However, larger individuals have been caught, according to C. R. Landon, leader of government predatory animal control in the Lone Star State. Some time ago, one of his men caught a giant red wolf weighing 63 pounds, near Llano. While the gray wolf has a very wide range in North America, the red wolf is a species of limited habitat, being found only in Texas and adjoining states of the Southwest.

The State of Texas has no red wolf bounty at the present time. The authorities learned a lesson from experiences of other western states in trying to eliminate the gray wolf. They discovered that while the bounty method had obvious advantages, there was a tendency for certain unscrupulous hunters to bring animals across the state borders. Another unfair and harmful practice of the "bounty wolfers" was to permit the females to live, with the result that often in the long run, far from being eliminated in a given state, the wolves increased in number.

In certain instances, however, private bounties have been created, a flat rate per head being offered by some clubs and individuals. In a number of neighborhoods, scattered individual despoilers have been doing so much damage that bounties as high as \$150 to \$300 are being offered.

ITEMS

LEATHER books need pure air just as much as humans do. Recent tests by the U. S. Bureau of Chemistry, analyzing a large number of worn leather bookbindings, show that leather books deteriorate when exposed to harmful sulphurous and acidic impurities. Backs of leather books deteriorate quicker than the sides because ordinarily they are more exposed to light and impure air, the tests reveal. To prolong the life of treasured leather bindings, steps should be taken to prevent their deterioration through the absorption of atmospheric impurities. Certain coatings and finishes, notably neat's foot and castor oil, are stated to be excellent for the purpose.

WHEN Dr. A. L. Quaintance, associate chief of the U. S. Bureau of Entomology, accompanied by several fellow scientists, visited the headquarters of the Japanese beetle warfare at Riverton, N. J., recently, the pests, in addition to denuding orchards of fruit and leaves alike, were feeding busily on the silk of young sweet corn. This type of injury, scientists fear, may indicate serious damage to the country's corn crop if the pest can not be headed off from the corn belt of the Middle West.

AT the Fifth International Genetics Congress in Berlin, Professor William M. Eyster, of Bucknell University, told how his studies of variegations, or contrasting colors appearing in the leaves and flowers of plants, led him to the adoption of the genome hypothesis. The

standard concept, that genes were indivisible hereditary units, could not account for these stripings and spottings, and the only thing to do was to think of the genes as cut up into sub-units, which usually hang tightly together, but which on occasion can come apart and rearrange themselves. When they do this, they form a sort of genetical mosaic, which expresses itself in the mosaic appearance of the plant itself.

STRONG preponderance of women, the disappearance of large families, and concentration of the population in cities are high lights of an analysis, just published, of information gained from the census of England and Wales for 1921. With 649 people for every square mile of territory the population is more dense than in any other country for which statistics are available. Nearly 80 per cent. of the people live in towns and about half of these in 46 cities of over 100,000. Of the 17,178,050 persons gainfully employed, 5,065,332 were women. The surplus of women over men in the two countries amounted to 1,700,000 and showed up particularly in the age group of 30 to 35 where there were 1,470 unmarried women for every 1,000 unmarried men.

THE slight earthquake reported as having been felt in Constantinople at 5:16 P. M., Eastern Standard Time, on Sunday, September 11, was in reality the edge of an unusually severe shock whose epicenter was about 150 miles east of that city, in Asia Minor, according to seismologists of the U. S. Coast and Geodetic Survey. Calculating from data gathered by Science Service from six American and Canadian observatories, the government scientists located the point of greatest disturbance as lying close to the margin of an eastern Mediterranean area known to be very frequently shaken by earthquakes. The stations furnishing the data were those of the U. S. Coast and Geodetic Survey at Chicago, Tucson and Manila, two Canadian stations at Ottawa and Victoria, and Father Tondorf's instruments at Georgetown University, Washington, D. C.

THE preference of natives of South China for the flavor of raw or half-cooked fish has resulted in wide-spread infection from a parasite known as clonorchis. Scientists from both the orient and the occident at the Peking Union Medical College have tracked down the life history of the parasite and are attempting to work out some sort of curative treatment for its human victims. The clonorchis spends part of its existence in the body of fresh-water fish and the disease it causes is unknown in the regions of North and Central China, where more thorough habits of cooking are the rule, according to Dr. Ernest Carroll Faust, who has been directing the research on this problem. Preparations of antimony have been found helpful in treating some cases but it is not potent enough to kill off the parasites. The aniline dye, gentian violet, has worked very well with animals but has not yet been tried out on people, the investigators state. The really important way of eliminating this disease, they declare, is to train the Chinese *actually* to cook what fish they eat and safeguard from contamination the lakes and pools where fish are bred.