

THE SCIENCE NEWS-LETTER

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DISCOVERER OF WHITE INDIANS PLANS NEW PANAMA EXPEDITION

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An expedition to penetrate unknown territory of Panama occupied by the White Indians discovered this spring by R. O. Marsh, American civil engineer and explorer, is being organized in Washington, D. C. with the cooperation of leading scientific institutions.

The Marsh expedition, which returned to the United States in July bringing with it three White Indian children and five brown Indians of the region, explored a large area of territory never before entered by white men. But the country occupied by large settlements of the unique White Indians was not entered, though flown over by airplane, and will be the objective of the party to leave this country in January.

The party of Darien Indians, including the two White Indian boys, Marguerite, a fourteen year old White Indian girl, her father and mother both brown Indians, and three grown brown Indian men, one of them a leading chief, has spent the summer at Mr. Marsh's summer home near Prescott, Ontario, on the St. Lawrence River.

The party is now in Washington where they were recently presented to President Coolidge and studied by the scientists at the Smithsonian Institution, the U. S. National Museum, National Research Council, and the Carnegie Institution of Washington.

In the summer of 1923 Mr. Marsh while exploring in the Darien region of Panama saw and photographed at long distance seven White Indians who had come to a settlement in the lower waters of the Chucunaque River. Legends of large White Indian settlements led him to equip and head a scientific expedition to explore the unmapped country into which the Indians have previously allowed no white men to penetrate. Before the explorations by land, Mr. Marsh, with the cooperation of the U. S. Army, conducted an airplane reconnaissance of Darien that revealed major mistakes in existing maps.

The San Blas Indians who occupy the Atlantic coast of the Darien region have never heretofore allowed white men to stay overnight within their territory. Mr. Marsh entered the country from the Pacific side and after a hard journey up the Chucunaque River and over the San Blas Mountains, he arrived at the "back door" of the San Blas tribes. By tactful treatment of the Indians and by furnishing them medical assistance, he finally won the confidence of the chiefs. Until he got the cooperation of the Indians he was unable to see even one White Indian at close range; once the San Blas Indians were won as friends; four hundred White Indians were summoned for Mr. Marsh's inspection and he was allowed to bring three of the

children to the United States.

Among the brown San Blas Indians of the Darien coast the White Indians are outcasts. They are forced to live in segregated settlements on the south or Pacific side of the mountains along the coast. White Indian children are sometimes born of brown Indian parents who are of a distinct and stockier build than the typical San Blas Indian and who have White Indian ancestors. These white children are allowed to remain in the coast settlements only until they are old enough to look out for themselves. Then they are banished and sent into the White Indian settlements up in the mountains.

The anthropologists, ethnologists, and biologists who have examined the White Indians have been unable to agree upon any cause for their white skin, hazel-brown eyes, yellow hair, and red gums combined with Indian features of a superior type. Among the theories of causes and origins that have been suggested are,

1. The White Indians are called albinos or partial albinos. This is a name that does not explain their origin nor does it take into account the albinos found among other races whose hair and eyes are totally devoid of pigment. Some anthropologists have called the White Indians albinos while other anthropologists and biologists declare that they do not exhibit albinism as they understand it.

2. Some disease or pathologic condition has prevented pigmentation and this lack of coloring matter in the skin has become so fixed in the race that it is inherited from generation to generation as an acquired characteristic. The White Indians are not sick in the ordinary sense of the word, and the three White Indian children brought to this country by Mr. Marsh are in better health and more mentally alert than the average white child.

3. The White Indians are the beginning of a new white race, perhaps duplicating what happened many thousands of years ago when the present white race was evolved from dark skinned stock. If this is so, the White Indians are what is known as biologic "sports", a condition of extreme scientific interest because of its bearing on the biological problems of men.

4. The White Indians are the result of a mixture of white or Nordic blood with the brown Indian blood. If this is so it must have occurred many years before Columbus discovered America, because his records and those of Balboa and later explorers tell of White Indians in Central America and Panama at the time of their explorations. One suggestion is that the Vikings and Norsemen who discovered and settled New England in the twelfth century found the climate too cold for them took to their ships, went south and mixed with the Maya and Aztecs of Mexico, who later emigrated to Panama, becoming the ancestors of the present White Indians. There are records also of a Welsh nobleman sailing with a large company in the direction of America in 1207 and some believe that an admixture of these early voyagers resulted in the White Indians seen by Balboa and now discovered by Mr. Marsh.

Frankly, scientists are unable to determine the cause and origin of the White Indians, although they consider that Mr. Marsh's explorations have resulted in a major ethnological and anthropological discovery. Dr. Ales Hrdlicka of the U. S. National Museum said:

"The phenomenon deserves a thorough scientific investigation, and Mr. Marsh deserves the thanks of American and British anthropologists for having brought to their attention a subject of considerable scientific interest and importance."

The 1925 Marsh expedition to Darien including, it is hoped, geneticists, ethnologists and anthropologists, will have the task of solving this unique racial mystery.

Mr. Marsh intends to take the five brown Indians back to Darien with him, but he hopes to be able to keep the three White Indian children in this country and educate them in American schools.

MAGNETIC MACHINES SAVE COAL NOW LOST IN CLINKERS

Electro-magnets of great power are used in new types of fuel-saving machinery, to pick the clinkers out of the unburned coal. The first successful tests of these machines in this country are described by Rudolph Kudlich, of the Bureau of Mines, U. S. Department of the Interior.

The principle underlying the new type of clinker separator depends on two simple facts; first, that clinkers and coal do not fuse together, and second, that practically all clinkers contain a little iron and are therefore weakly magnetic. The new machines pass crushed furnace wastes under electro-magnetic drums, which lift out the magnetic clinker particles and permit the non-magnetic coal to pass on, to be returned to the bins.

Savings well worth figuring on may be effected by salvaging unburned coal from furnace wastes. One well known combustion engineer estimates that the average amount of combustible in the refuse from a large stoker fired central station boiler plant is about fifteen or twenty per cent. Assuming that the coal burned contains twelve per cent. of ash, and allowing for flue dust losses, approximately two per cent. of the original coal is thus carried out, unburned, in the ashes.

Most of the methods of coal salvage at present in operation involve the use of water, to float off the light particles of half-burned coal, while the heavier clinkers sink. Such systems, however, are claimed to be less efficient than magnetic separation.

The magnetic method has already been tested in Europe, where fuel costs present even more serious problems than they do in this country. Tests reported by a German firm showed recoveries up to eighty-seven per cent. of the combustible in the refuse.

RICKETS CURED BY ULTRA VIOLET LIGHT CAPTURED BY FOOD

The mystery of why rickets can be cured by so dissimilar treatments as administration of codliver oil and exposure to sunshine has been solved.

Cod liver oil and other substances curative of rickets are bottled sunshine.

When substances curative of rickets are exposed to the air or utilized in the body, they actually give off ultra-violet light, the same sort of radiation to which the sunlight and the radiations from mercury quartz lamps owe their effectiveness.

This is the discovery just announced from the Department of Pediatrics of Yale University by Prof. I. Newton Kugelmass and Dr. Irving McQuarrie. And