

but his philosophy will save him the retribution of his misdeeds; for he will know not to concern himself with the color of the electron unless the matter has a bearing. He will be apt to reap only the wheat from his harvest and leave the tares.

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THE WHITE INDIANS OF THE SAN BLAS AND DARIEN

As a result of recent studies carried on in the Darien region of Panama, more specifically on the San Blas coast, certain facts concerning the reported White Indians have been brought to light.

The White Indians obviously express a form of albinism which has been termed imperfect or partial albinism by Geoffroy Saint Hilaire, Pearson and others. These terms signify that either the skin, hair or eyes, any two or all three may fail to express the full albinotic condition, but that one or more are, partially at least, relatively free from pigment.

Such a condition actually applies to the Indians in question. Many, if not all, of the White Indian males have frecklelike copper colored pigment spots of varying size, location and number, which evince an imperfect condition of albinism in the skin. Again the hair is not necessarily devoid of pigment, but in some cases shows traces of brown and in other cases is clearly auburn. Finally the iris is hazel (blue with brown spots), or dark blue, or dark violet. These observations clearly establish the fact that, if any classification of different degrees of albinism is valuable, as no doubt it is, the White Indians of Darien and the San Blas must be considered imperfect or partial albinos.

This contention, as opposed to the classification of these Indians as persons exhibiting idiopathic leucoderma, is supported by the fact that the condition obviously has a genetic basis, and that it is not the result of progressive development but is apparent at birth. Indeed its hereditary nature is demonstrated clearly in the hundred or more matings, the history of which I obtained during my residence in San Blas. If idiopathic leucoderma be considered as an inherited trait, then the terms imperfect and partial albinism and idiopathic leucoderma obviously approach a synonymous significance.

The origin of the condition expressed in the White Indians would seem to be most satisfactorily placed in the mutation theory. I saw no evidence of their origin being traceable to previous miscegenation with Caucasians.

The White Indians appear frequently from matings of brown San Blas Indians, resident on the islands

just off the mainland, and on the mainland itself. Indeed this is the principal source of White Indians in the region, as whites are not permitted to mate with whites, and browns only very rarely mate with whites.

Do the White Indians form a race? If for the existence of a race one demands geographical segregation and permanency through the demonstrated production of likes by likes the White Indians can not be said to form a race, for they neither occur by themselves in segregated geographical areas nor are they permitted to reproduce their kind. But if in a definition of race one includes any group exhibiting strikingly differential characteristics which are insured of permanency by virtue of possessing a genetical basis, then the White Indians of the San Blas may be said to form at present a race which, due to artificial restrictions, is dependent for its continued appearance upon another race, carrying factors for the former's inherited differential characteristics in its germplasm. It is obvious that whatever definition is applied the difference is not qualitative but rather quantitative; the qualitative basis, genetical nature of differential characteristics, being present in either case. Whether or not it is admitted that the White Indians now form a distinct race there can be no question that, at least, they hold potentialities for race production.

Actually, it may be repeated, the whites do not occur by themselves in a segregated geographical area but are to be found in varying numbers in practically all the "brown" villages of the region, where they appear, from time to time, from matings of recessive carrying browns with recessive carrying browns. The whites form about 0.7 per cent. of the total population: an exceedingly high proportion for any form of albinism. This high proportion I attribute to the fact that intense inbreeding has occurred for some time in the Indian villages. Thus conditions are highly favorable for the frequent expression of any recessive traits occurring in the strain. Since all known forms of albinism are apparently recessive to the normal condition, and as albinism, like all recessive traits, occurs more frequently in consanguineous marriages than in the population at large, the observed high proportion of whites among the San Blas Indians is not astounding, in view of the constant inbreeding which occurs.

The exact method of inheritance functioning in the present instance is not yet established. The condition is apparently recessive to the normal, but it is not clear whether it is due primarily to the action of a single gene, in its interrelation to the whole chromosomal content, or whether the genetic composition

of the whites differs in more than one gene from that of the normal San Blas Indians.

A more detailed presentation of the observations made and the data collected will be made in the near future.

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THE JAMES SIMPSON-ROOSEVELT EXPEDITION OF THE FIELD MUSEUM OF NATURAL HISTORY

COLONEL THEODORE ROOSEVELT, JR., and his brother Kermit, sons of the former president, sailed from New York April 11 to lead an expedition through southern and central Asia under the auspices of the Field Museum of Natural History of Chicago. The magic of the name Roosevelt has led to much attention from the newspapers, and many questions are still being asked. To meet some of those which may arise in the minds of readers of *SCIENCE*, therefore, I have been requested by Mr. D. C. Davies, director of Field Museum, to make a brief statement regarding the expedition.

The possibility of such an expedition had been considered by Mr. Kermit Roosevelt for some time, but just what form it would take and whether or not his brother Theodore could join forces with him was not decided until quite recently. Like their father, both the younger Roosevelts have an extraordinary interest in natural history and a knowledge of animal life far beyond that of the average sportsman. They have read widely in the literature of zoological exploration and are by no means superficial in their grasp of fundamental problems connected with the study of the origin, evolution and distribution of faunas and special groups. As boys, they collected and prepared specimens to form small private collections of their own, and are thoroughly familiar with the detailed purposes and requirements of museum material. Therefore, like their father, they wished to have an expedition which would improve all opportunities to make it of lasting value to science. This was beyond their personal means, so they made known their desires to Mr. Stanley Field, president of the Field Museum. Mr. Field immediately took up the matter with Mr. James Simpson, a trustee of the museum, who had previously manifested his interest in the institution by the gift of its public lecture hall, known as the James Simpson Theater. Mr. Simpson, thereupon, agreed to provide the necessary support, involving no remuneration for the Roosevelts, but making it possible for them to carry all desired equipment for general zoological collecting and to employ trained as-

sistants to cover special fields. The trip thus became a museum expedition and the principals have made their plans accordingly with a spirit quite as if they were regular members of the museum staff.

The expedition will enter India at Karachi and Bombay and proceed to Srinagar in Kashmir. Thence it is planned to cross the Himalayas *via* Leh and the Karakoram Pass, to make excursions into the Pamir region and then to push on across Turkestan to the Thian Shan Mountains. Subsequent movements will depend upon circumstances, but it is hoped to work in other parts of Turkestan and adjoining regions. The duration of the trip also is uncertain and, if necessary to accomplish the desired results, it will doubtless be prolonged beyond the present year. Newspaper accounts have, perhaps, borne rather heavily on the idea that the region to be visited is wholly unknown and quite unexplored. This of course is not justified, for although it is remote and difficult of access, sportsmen and travelers, mainly British and less famous than Marco Polo, have traversed much of it, and various books and maps have been published. Many parts of it, however, offer wholly new fields for the modern zoological collector and carefully made collections are particularly desirable at this time to supplement those being made somewhat farther north by Roy Chapman Andrews and the Third Asiatic Expedition in connection with which the American Museum and the Field Museum have a cooperative agreement. Aside from brief notes in various serials, the only study of any considerable part of the vertebrates of the region is found in the "Scientific Results of the Second Yarkand Expedition," published in 1879.

For practical reasons, the expedition is accompanied at the outset by only one trained zoological collector, Mr. George K. Cherrie, but others will be engaged in England or in India, and no pains or expense will be spared to make thorough collections, at least of all the vertebrates of the regions visited. Besides the usual equipment for collecting skins, skulls and skeletons of mammals and birds, portable tanks, preservative and paraphernalia are being carried to enable attention to be given to reptiles and amphibians or freshwater fishes. The party will be divided from time to time and special collectors will be sent into particular regions to work uninterruptedly along particular lines. Mr. Cherrie is known especially as an ornithologist, but is competent in all branches of field work and, by his long experience on many previous expeditions, is especially qualified for the general supervision of work of this kind. He was at one time connected with the Field Museum in its department of zoology and, later, he held a position with the Brooklyn Museum. In recent years he has been a free lance collector employed only at intervals, mainly by the American Museum of Natural History. His free-