

Negrito Racial Strain in India.

THE presence of a negrito strain in the aboriginal population of India has been suspected for a long time, but any definite evidence as to its existence has been lacking so far. Thus in the opinion of the Sarasin Brothers "no one has yet succeeded in finding pure woolly hair in India" (*Ergebnisse naturwissenschaftlichen Forschungen auf Ceylon*, 3, 355; 1893), a view which has also received the support of Turner (*Transactions of the Royal Society of Edinburgh*, 40, 114; 1905), Lapicque (*Revue Scientifique*, 6, July 1906), Thurston ("Tribes and Castes of Southern India," vol. 1, Introduction, 1909), and Risley ("The Peoples of India," p. 15, 1915).

During a recent visit to the Kerala country I measured a large number (seventy) of Kadars living in the Cochin Hills (Fig. 1). The majority of this



FIG. 1.—Two Kadar men from the Cochin Hills.

people are not unlike the other jungle tribes of southern India, having a head of hair varying from wavy to curly, but in the extreme interior of the hills I was fortunate enough to find five men and one woman with undoubtedly spirally curved hair, one of whom was pure woolly with short spirals, and the rest were of the frizzy type, similar to that seen among the Melanesians. Besides their spirally curved hair, the Kadars are short (average stature, 1516 mm.), of very dark complexion (the skin colour varying from 29 to 33 in von Luschan's scale), prognathic, and have not infrequently receding foreheads. I was informed by Mr. K. Govinda Menon, Conservator of Forests of the Cochin State, and one who has known the Kadars very intimately for the last quarter of a century, that in the early years of his service he noticed at least a dozen men and women with woolly and frizzy hair, but who must have died out since.

The head measurements of the Kadars do not show them to be brachycephalic, the average cephalic index of the five men (with spirally curved hair) measured by me being only 75.06. Of these five men, however, two are mesocephalic, with 79.29 and 77.34 as their respective cephalic indexes, while the rest are in the lower grades of dolichocephaly. It is not improbable that the negrito element among the Kadars

was originally brachy-, or at least mesocephalic, but in its admixture with the long-headed Vedda-like race, which forms the dominant element among the Kadars to-day, the head has become considerably elongated.

It would not be safe to assume anything more until further investigations take place, but it is just possible that the detailed analysis of the measurements to be published later may throw some light on the question. In this connexion it is interesting to note that the designs on the bamboo combs worn by Kadar women ("Die Zauberbilder Schriften der Negrito in Malakka," by K. T. Preuss, *Globus*, 1899) are strikingly similar to those of the Semangs—a negrito tribe of the Malay Peninsula with short stature, dark complexion, and medium head (Av. C.I. 79), who are not unlike the Kadars in general appearance.

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New Regularities in the Band Spectrum of Helium.

BY the work of Curtis and Fowler, the structure of the band spectrum of helium has become well known. More recently, Weizel and Füchtbauer (*Zeit. f. Phys.*, 44, 431; 1927) added considerably to our knowledge of the spectrum by detecting a number of new bands which they could ascribe to transitions between terms with the oscillational quantum number one. Nevertheless, there appear to be in the spectrum still many lines which have not yet been arranged into bands. As the helium band spectrum is of considerable theoretical interest, we have analysed those parts not yet studied by previous investigators.

As these parts are very rich in lines, it was necessary to use high dispersion. With a suitably constructed powerful discharge tube it was possible to photograph the spectrum with sufficient intensity in the first, second, and third orders of a 15 ft. concave grating. We were able to find more than twenty new bands, and a number of parts of other bands which we hope to be able to complete in the near future. Most of the new bands have the $2p$ state as final state. The initial states have, however, a structure different from that of the terms discovered by Curtis as they cannot be represented in first approximation by a quadratic formula. This and the fact that they combine in a different way with the $2p$ terms causes the appearance of the new bands to be much different from that of the other helium bands, and bands of a similar structure do not seem to have been found either in other band spectra.

The band $2p-3z$, for example (we designate provisionally the new terms by the last letters of the alphabet), has only a P - and a Q -branch, the R -branch being absent. The band $2p-3x$ has a strong P - and R -branch; the Q -branch is absent or very weak. The band $2p-3y$ has three branches which have the appearance of a Q -branch, a P -branch and a branch in which the effective rotational quantum number decreases by two units. Whereas many bands overlap in the more refrangible side of the spectrum and make its structure there extremely complicated, the arrangement of bands is quite open in the region between 5700 Å. and 6700 Å. There we have, except the bands $2p-3d$ and $2p-3s$ discovered by Curtis, the bands $2p-3x$, $2p-3y$, $2p-3z$, and the five analogous bands for par-helium, which have exactly the same structure but are much fainter than the ortho-bands. The absolute values of the $3x$, $3y$, and $3z$ terms lie between those of the $3s$ and $3d$ terms. We have not yet succeeded in unravelling the structure of par-helium $2P-3D$, but only locate its position.

Besides bands in which terms of a new type are