

drugs, from 1790 to 1810; what is commendable in these experiments, and what is deficient.

Suggestions were made relative to further experiments (1) on the objects to be pursued, (2) on the mode of proceeding, (3) on the utilization of the results.

The paper recommended the investigation of the physiological action of medicines with the view to determine their therapeutic use.

On the Movements, Structure, and Sounds of the Heart. By Dr. SIBSON, F.R.S.

ANTHROPOLOGY.

Address by A. R. WALLACE, F.R.G.S., &c.

ANTHROPOLOGY is the science which contemplates man under all his varied aspects (as an animal, and as a moral and intellectual being) in his relations to lower organisms, to his fellow men, and to the universe. The anthropologist seeks to collect together and systematize the facts and the laws which have been brought to light by all those branches of study which, directly or indirectly, have man for their object. These are very various. The physiologist, for example, studies man as a wondrous and most complicated machine, whose parts and motions, actions and reactions he seeks thoroughly to understand. The comparative anatomist and the zoologist compare his structure with that of other animals, take note of their likenesses and differences, determine their degrees of affinity, and seek after the common plan of their organization and the law of their development. The psychologist studies the mind of man, its mode of action, and its development, compares it with the instincts and the reasoning faculties of the lower animals, and ever aims at the solution of the greatest of problems—whence and what is mind. The historian collects and arranges the facts of man's progress in recent times; the geographer determines the localities of the various races that now inhabit the earth, their manners, customs, and physical characteristics; the archæologist seeks, by studying the remains of man and his works, to supplement written history and to carry back our knowledge of man's physical, mental, and moral condition into prehistoric times; the geologist extends this kind of knowledge to a still earlier epoch, by proving that man coexisted with numerous animals now extinct, and inhabited Europe at so remote a period that the very contour of its surface, the form of its hills and valleys, no less than its climate, vegetation, and geology, were materially different from what they now are, or ever have been during the epoch of authentic history; the philologist devotes himself to the study of human speech, and through it seeks to trace out the chief migrations of nations, and the common origin of many of the races of mankind; and, lastly, the phrenologist and the craniologist have created special sciences out of the study of the human brain and skull. Considering the brain as the organ of the mind, the phrenologist seeks to discover in what way they correspond to each other, and to connect mental peculiarities with the form and dimensions of the brain as indicated by the corresponding form of its bony covering. The craniologist, confining his attention to the skull as an indication of race, endeavours to trace out the affinities of modern and ancient races of men, by the forms and dimensions of their crania. These various studies have hitherto been pursued separately. There has been great division of labour, but no combination of results. Now it is our object as anthropologists to accept the well-ascertained conclusions which have been arrived at by the students of all these various sciences, to search after every new fact which may throw additional light upon any of them, and, as far as we are able, to combine and generalize the whole of the information thus obtained. We cannot, therefore, afford to neglect any facts relating to man, however trivial, unmeaning, or distasteful some of them may appear to us. Each custom, superstition, or belief of savage or of civilized man may guide us towards an explanation of their origin in common tendencies of the human mind. Each peculiarity of form, colour, or constitution may give us a clue to the affinities of an obscure race. The anthropologist must ever bear in mind that, as the object of his study is *man*, nothing pertaining to or cha-

racteristic of man can be unworthy of his attention. It will be only after we have brought together and arranged all the facts and principles which have been established by the various special studies to which I have alluded, that we shall be in a condition to determine the particular lines of investigation most needed to complete our knowledge of man, and may hope ultimately to arrive at some definite conclusions on the great problems which must interest us all—the questions of the origin, the nature, and the destiny of the human race. I would beg you to recollect also that *here* we must treat all these problems as purely questions of science, to be decided solely by facts and by legitimate deductions from facts. We can accept no conclusions as authoritative that have not been thus established. Our sole object is to find out for ourselves what is our true nature, to feel our way cautiously, step by step, into the dark and mysterious past of human history, to study man under every phase and aspect of his present condition, and from the knowledge thus gained to derive (as we cannot fail to do) some assistance in our attempts to govern and improve uncivilized tribes, some guidance in our own national and individual progress.

Recent Explorations in Chambered Cairns in Caithness. By J. ANDERSON.

On the Stature and Bulk of the Irish, and on Degeneration of Race.

By Dr. J. BEDDOE.

The author had derived his data from the measurement of 1517 recruits of Irish birth, and of 23 years of age and upwards. The average height and weight yielded by his figures were 5 feet 7·25 inches and 138·03 lbs.; these he supposed to represent corrected averages of 5 feet 7·4 inches and 138·5 lbs., allowing for surplusage. The men were measured and weighed naked. The true average stature of the general population, or of that portion of it which supplied recruits, including men of insufficient height for the army, might be conjectured from the culminating point of the numbers at each inch on the scale. It would probably be 5 feet 6·5 inches, or a trifle more, for all Ireland, varying from 5 feet 7·3 inches in the agricultural population of the eastern and southern provinces, to as low as 5 feet 5·5 inches in Connaught. Dr. Beddoe endeavoured to investigate the proportions of the principal race-elements in the several provinces by the aid of an analysis of the surnames; he showed that the degradation of stature, so far as the numbers observed enabled him to decide, was greatest among the Connaught people with Saxon or imported names; and argued the question whether this might be due to the original differences of race, or to the influence of causes of degeneration.

On Stone Implements of Esquimaux. By Vice-Admiral Sir EDWARD BELCHER.

On Colonies in South Africa. By W. J. BLACK.

On a Condylus Tertius occasionally observed in the Skulls of Natives in the Indian Archipelago. By C. CARTER BLAKE, F.G.S., F.A.S.L.

The author described the circumstances under which a medial condyle was occasionally developed from the basioccipital bone, and compared the observations of Halbertsma and Barnard Davis. The most striking case he had yet observed was one which was presented by a skull of a Yenadie from Strihureecottah, in Madras. The condylus tertius had here articulated with the odontoid process of the axis vertebra.

On Skulls from Round Barrows in Dorsetshire. By C. C. BLAKE, F.G.S.,
Curator and Librarian, Anthropol. Soc. Lond.

The author remarked that they were obtained by Dr. Hunt, the President of the Anthropological Society, from some barrows near Blandford. Dr. Thurnam, in a dissertation on the two principal forms of English and Gaulish skulls, gave a table containing the measurement of twenty-five skulls from the English round barrows.