

Let me give a concise account of what I know in regard to this matter. At the end of June of this year Mr. Weigall, the Government inspector in the Service des Antiquités at Luxor, acting on the instructions of M. Maspero, the director-general of that department, sent me a skeleton to be examined and reported on. The skeleton was practically complete, for, although the face, certain ribs, and part of the pelvis were broken, most of the fragments were sent. Mr. Weigall told me that the bones were found in their coffin in a tomb opened by Mr. Theodore Davis in January last, and that they were supposed to be the remains of Queen Tii. Moreover, he has assured me that no possible mistake could have been made, because he himself and Mr. Ayrton had packed the bones, and they were received and unpacked by me in the anatomical department of the Cairo School of Medicine. The fact that the bones were soaked with paraffin wax, and that no other skeleton is known to have been so treated in Luxor, puts their identity beyond all doubt.

The skeleton is undoubtedly that of a young man of about twenty-five years of age.

It does sometimes happen that a skeleton presents features of such an indefinite character that even the most experienced anatomist hesitates before expressing an opinion as to sex; but these bones do not fall into such a category. All of them, and especially the skull, pelvis, and leg-bones, present the male characteristics in such a pronounced or even exaggerated form that a junior student of anatomy would be considered exceptionally stupid if he failed to recognise the sex. The skull is big and heavy-jawed, the frontal sinuses and superciliary ridges are exceptionally large, even for a man, and the mastoid processes are typically masculine; although the skull is exceptionally capacious, the face is disproportionately big. On the evidence of the cranium alone the sex is obvious.

The pelvis exhibits the most characteristic masculine features. The shape of the pubes and the pubo-ischial rami, the size and shape of the subpubic angle (67°), the form of the obturator foramen, the proportions of the pelvic cavity, and the shape of the iliac bones all conform to the definitely male type. The femur also serves to demonstrate the male sex in its size, inclination of shaft, and size of head.

Mr. Theodore Davis and those who have disseminated extracts from his letters have dealt rather unfairly with the two medical men, whose opinions they quote, in giving such wide publicity to statements which could have been made only in the most casual manner by anyone with any medical training whatsoever. It is so absurd as to be altogether incredible that "a prominent American obstetrician" would quote the figures 90° to 100° for the female subpubic (misquoted "pelvic" by Prof. Sayce and Mr. Hall) angle, and 70° to 75° as the average for this angle in the male, with the object of demonstrating the female sex of a pelvis the subpubic angle of which is only 67° !

But, quite apart from the very obvious male characters of the skeleton, there are even more obtrusive features equally fatal to the possibility of it being Tii's, which could hardly have escaped the observation of a medical man, however casual.

The teeth are practically unworn; three of the "wisdom" teeth had just been "cut," and the fourth was only just emerging from the jaw at the time of death; and a large number of epiphyses on ribs, vertebrae, clavicles, sternum, and pelvis were either separate or in process of joining. In other words, the bones are clearly those of a person of about half the age Queen Tii is known to have reached.

The archaeological and historical remarks in Mr. Hall's letter do not concern me.

In a short time I shall publish a full account of this skeleton, with photographs exhibiting the evidences of sex and age, and the points of similarity and dissimilarity to the mummies of Amenhotep III., Yuaa, Thua, Thothes IV., and perhaps some other royal mummies of the eighteenth dynasty.

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Cairo, October 4.

NO. 1981, VOL. 76]

The Interpretation of Mendelian Phenomena.

ALTHOUGH it is impossible within the limits of a short letter to attempt an answer to the question of the bearing of "Mendelism" upon biological problems in general, there are one or two points in Dr. Archdall Reid's letter in NATURE of October 3 which seem to require discussion.

Dr. Archdall Reid begins with the following statements:—"Mendelian phenomena are possible only when reproduction is bi-parental. They cannot occur, of course, when it is parthenogenetic." In the first of these statements the expression "bi-parental" should not be taken too literally, since in the majority of cases of Mendelian inheritance investigated hitherto the method of so-called self-fertilisation has been employed. I hope I may be pardoned for the assertion that the second statement is a little premature. For my own part I shall certainly await the result of experimental evidence upon the point before accepting it as conclusive.

In the absence of Dr. Archdall Reid's definition of what he means by "the problem of sex," I am not sure that I entirely understand the remainder of his first paragraph; but the suggestion may be made that "the function of sex," "the causation of variation," "retrogression of characters," and "mode of development" are less immediately to the purpose in the present condition of biology than the problems of the actual method of transmission of existing characters. Upon the problem of the "alleged transmission of acquirements" Mendel's facts may even be said to throw some light; but in any case it seems rather severe treatment to belittle the importance of a biological discovery merely because it does not immediately lead to the solution of all the most difficult problems which biology affords.

Once more it must be repeated that the appearance of a blended first cross is no criterion of non-Mendelian inheritance. In the case of a problem like that of man, complicated as it is by the fact that he has "crossed more often than any other animal," and further rendered intractable by the circumstance that he is not amenable to experiment, a great difficulty arises in discovering which are the actual allelomorphs concerned. For these natural characters pay no heed to our definitions; so that if an investigator makes the mistake of first rigidly defining the "characters" with which he proposes to deal, and does not keep a perfectly open mind, prepared to revise his definitions in the light of the evidence which experiment alone can afford, he runs a great risk of finding only confusion where a proper analysis would have shown the presence of perfectly definite methods of inheritance. It would be extremely interesting to students of genetics to learn upon what evidence Dr. Archdall Reid bases his positive statement that there is no segregation in the case of the mulatto.

There is certainly occasion for surprise in finding it maintained that "nature selects only mutations"; but that natural conditions lead to the obliteration of a host of mutations is as fair a deduction from the fact that such mutations appear under cultivation as the current deduction that the conditions of cultivation actually cause the occurrence of this kind of variation. We have the testimony of de Vries and others that the former process actually takes place. That the latter process does so is an assumption which still lacks the support of facts.

R. H. LOCK.

Botany School, Cambridge, October 7.

The Colour of Dye Solutions.

It is generally accepted that the colour of dye solutions depends upon the chemical structure of the dye, and colour changes are usually attributed to some change in constitution; but certain recent investigations on colloidal solutions show that this argument must be accepted with caution. It is well known that colloidal solutions of the metals are highly coloured. Further, it is recognised that many dyes exist in solution in what, for lack of a better term, must be called the colloidal state. Some observations of my own point to the following statement as being true for certain dyes:—

The absorption spectrum of the dye in solution may be