of these papers taken together are (1) that in Birds sex-limitation is found in the female, while in Mammals it is in the male; and (2) that several new cases are described in which the coupling with sex is partial rather than absolute.

L. Doncaster.

Morgan, T. H. Heredity of Body Colour in *Drosophila*. Journ. Experim. Zool. 13. 1. 1912. p. 27—46. (1 colour plate.)

Morgan, T. H., and Cattell, E. Data for the Study of sex-linked inheritance in *Drosophila*. Journ. Experim. Zool. 13. 1. 1912. p. 79—102.

The first paper shows that the colour of the wild fly ("gray") is due to three factors, Black (**B**), Yellow (**Y**) and Brown (**Br**). Absence of **B** produces a yellow fly, absence of **Y** a black fly, absence of both **B** and **Y**, a brown. The factor **B** is sex-linked, but **Y** is not; whether **Br** is sex-linked has not yet been determined. It is pointed out that these factors for body-colour appear to correspond to the three factors for eye-colour already described, namely vermilion, pink, and orange, of which the pink and orange factors are sex-linked but the vermilion is not. There is however no organic correlation between the body- and eye-colours, for any eye-colour may be associated with any body-colour. Some disturbances of the sex-ratio occur in the crosses with these colours, such as have been described in connexion with certain other mutations of *Drosophila*, and the ratios of the various colours in F_2 show abnormalities which may perhaps be accounted for by gametic coupling.

The second paper gives a very valuable account of the phenomena of gametic coupling in transmission by the female of characters which are sex-limited when transmitted by the male. Since the male transmits such characters to his daughters only, they must always be associated when transmitted by the male; but when transmitted by the female it is found that characters which were associated in the grandparents reappear associated in the grandchildren. For example, if a red-eyed, black-bodied male is mated with a white-eyed, yellow-bodied female, the female offspring produce eggs which bear almost exclusively either the factors for red eye and black body, or for white eye and yellow body, the converse combinations red yellow and white-black hardly occurring. It makes no difference whether a 'present' factor is coupled with a second 'present' factor, or with an 'absence'. It is remarkable that the closeness of the coupling varies greatly in different characters; the coupling in the case of colour-factors is very close (about 200:1), while the coupling between the factors for colour and for size of wing is very low (about 2:1). This is the first case in which gametic coupling — already well-known in plants — has been worked out on a large scale in an animal.

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Baltzer, P. Über die Beziehung zwischen dem Chromatin und der Entwicklung und Vererbungsrichtung bei Echinodermenbastarden. Arch. f. Zellforschung. 5. S. 497—621. 5 Tafeln.

Um die Rolle des Chromatins bei dem Vererbungsgeschehen festzustellen, und zwar in Verfolg der von Boveri (in seinen Dispermieversuchen) angebahnten Gedankenwege, wurde parallel mit dem (oft behandelten) Schicksal der Bastardzuchten von Verf. sehr sorgfältig die Geschichte der elterlichen Chromosomengarnituren untersucht — auch durch Zählungen, oder an deren