der Naturwissenschaft nicht ausbleiben kann. Möge das Werk, das im bescheidenen Rahmen einer subtilen Spezialuntersuchung auftritt, derjenigen universellen Würdigung teilhaftig werden, die ihm seiner Verdienste um die Gesamtbiologie wegen zukommt!

Kammerer, Wien.

Mudge, G. P. On Some Features in the Hereditary Transmission of the Black and the "Irish" Coat Characters in Rats. Papers I and II. Proc. Roy. Soc. 1908.

The experiments of Doncaster (1905) in which the earlier work of Crampe was made use of rendered it clear that among tame rats three pairs of factors are to be met with. These are:

Colour	(C)	dominant	to	albinism	(c)
Grey	(G)	"	"	black	(g)
Self-colour	(S)	"	"	piebald	(s) (= hooded).

In addition to the piebald form there occur animals which have less white. Among these "Irish" rats two distinct types occur — those with a very little white on the ventral surface (= "Irish a"), and those with a much greater amount of white on the belly as well as with some on the feet (= "Irish b"). It was pointed out by Doncaster that the "Irish b" is always heterozygous for the self-colour factor (S). On the other hand Doncaster was unable from the evidence at his disposal to differentiate the "Irish a" from the fully self-coloured animals, but considered the latter to be the extreme forms in the reduction of the white area.

As a result of the experiments recorded in these two papers Mudge has been able to confirm Doncaster's account and to add a point of interest. Doncaster mentions Haacke's description of an albino rat in which the hair differed in texture over the area where the coloured hood and back-stripe are found in the piebald form, and suggests that such an albino would have been found to be homozygous in the absence of the self-colour factor (s) if it could have been tested. Mudge finds that this "ghost" pattern is a transitory thing lasting only a few weeks, and is the normal appearance in albinos belonging to a piebald strain. It does not occur in strains which are homozygous for S, and as the result of crossing an albino which in early youth was not a "piebald ghost" with a coloured piebald, there came, as was expected, only "Irish" b individuals.

One of the chief points of interest in these experiments with rats lies in the constitution of the "Irish a" and the "Irish b" forms. With regard to the latter Mudge agrees with Doncaster, and it now seems clear that the "Irish b" rat is always heterozygous in the self-colour factor (S). Mudge further points out that the "Irish b" can be readily distinguished from "Irish a" by the possession of white carpal and metatarsal bands. The relation of the "Irish a" to the self colour is however still not clear. Though admitting, that there is no direct evidence for the view, Mudge suggests that the "Irish a" are heterozygous in the pigmentation factor (C). Doncaster however in his paper (Exp. 63 and 64) gives two cases in which "Irish a" mated together gave, in addition to albinos, 16 "Irish a" but no self blacks. On the view of the "Irish a" suggested by Mudge 1 in every 3 blacks from such matings should be completely self coloured. It is evident that more experiments are needed before the relation between the self-coloured and the "Irish a" forms can be properly understood.

R. C. P u n n e t t.