

A MUTATION FROM BLACK TO BROWN IN *MUS MUSCULUS*

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Received 11.xii.49

A BUCK, 12/76.188 i, which was bred from an intercross for brown and misty in coupling ($mb/MB \times mb/MB$), and was itself phenotypically a non-misty black, was crossed, for purposes other than the present subject, to a misty-brown doe (mating 12/82) and a non-misty brown doe (mating E/296). By the former doe he has thrown twelve non-misty blacks to date, and by the latter one brown and twenty-four blacks.

χ^2 on 1 : 1 of the B : *b* segregation of all the buck's progeny is 33.1081 for one degree of freedom.

The simplest explanation for this performance is that the buck is homozygous for non-misty and black, and that the one brown offspring recorded is the result of a mutation of black to brown affecting one of his sperm.

Unfortunately the brown was produced amongst the first eleven of his offspring. As there was a two-thirds chance of the buck being heterozygous, the brown was not unexpected and was killed when fully classified, that is at the age of eighteen days when B/*b* was also classified. There is thus no possibility of testing the mutant gene.