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# The Inheritance of Leg-Feathering in the Chicken

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dams of which alone were the survivors the mortality was 61.4 per cent. The last two groups indicate that the male is as effective as the female in transmitting resistance to the progeny, as well as to show that a transfer of passive immunity is not responsible for the greater resistance of the chicks from the surviving parents. The speed of mortality in the different lots corresponded in general with total mortality, indicating that the chicks from parents that have survived an infection of fowl typhoid possess in general a higher potential of resistance than do chicks from parents that have not survived an epidemic of this disease.

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## THE SEX RATIO IN GUINEA PIGS

R. G. SCHOTT

The relative proportions of the sexes appearing in a total of 2,014 guinea pigs in the colony of the Department of Genetics, Iowa State College, over a six-year period have been studied. The ratio of males for the 2,014 animals was 49.4%. This is a close approach to the expected 50:50 relationship of the sexes as postulated by the sex-chromosome mechanism. Considerable seasonal fluctuation in the ratios were observed, but these are not consistent throughout the period. Age of parents, litter size, and litter sequence have no marked effect on the sex ratio.

The number of males dead at birth is greater than the number of females. Although this finding is consistent with previous observations among mammals, the difference here is not large enough to be considered significant. The death rate from birth to thirty days changes in favor of male viability, but the differences are not sufficiently great to be significant.

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## THE INHERITANCE OF LEG-FEATHERING IN THE CHICKEN

W. V. LAMBERT AND C. W. KNOX

The inheritance of leg-feathering in crosses of the Black Langshan (feathered) with the White Plymouth Rock and Buff Or-

pington breeds (non-feathered) has been found to be dependent upon two dominant duplicate factors ($S_1$ and $S_2$). This relationship has been verified from data secured from $F_2$ and backcross generations. Of five $F_1$ males used in these studies three proved to be heterozygous for both factors $S_1$ and $S_2$ and two for but one of these factors, while six $F_1$ females proved to be heterozygous for both factors and ten for but one factor. These data indicate, therefore, that the Black Langshan is often heterozygous for at least one pair of these factors.

Neither gene $S_1$ or $S_2$ is linked with the gene producing pigmented plumage (C). A similar study of the relationship between the leg-feathering genes and the factors for white versus yellow skin-color (W-w) indicate that a loose linkage may possibly exist between one of these genes ($S_1$ or $S_2$) and the factor W for skin color contributed by the Black Langshan. No tendency was noted for the $F_2$ and backcross males to have a higher degree of feathering than the females.

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## THE MYRIOPODA OF IOWA

BETTY ROGERS

A taxonomic study of the millipedes and cantipedes known to occur in the state. Keys and illustrations are given as an aid to identification. (This paper is published privately by the author at Mt. Pleasant, Iowa).

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