For several years, and at all seasons, fishermen have brought me odd specimens which have been taken from an area about five miles north-west of St. Abb's Head, Berwickshire. The species is sufficiently common on these grounds to make the local fishermen reluctant to set lines there, as the 'mack eels' interfere with the bait.

During Easter 1949 an attempt was made to trap *Myxine* in the area referred to above. Ordinary crab pots, fitted with a fine-mesh net, and with a small aperture for entry, were used, baited with fish. Some hagfish were taken; but the work had to be abandoned owing to bad weather. In the summer of 1949 trapping was resumed, and as many as nine specimens were taken in a single trap. It was found, however, that the traps were insufficiently strong to withstand the strong tides in the area, and it is hoped to try out a new type, consisting of a wooden box with a few small apertures.

In August 1950, with the co-operation of Dr. C. E. Lucas, of the Scottish Home Department Marine Laboratory, an echometer survey, together with line soundings using tallow, was carried out over the area. Results showed that the *Myxine* ground was a mud bottom lying between two ridges in 35–40 fathoms of water.

It is hoped to conduct further experiments to establish the extent of the colony and to record possible migrations.

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Interaction of Genes affecting the Wings in *D. melanogaster*

The interaction among genes controlling the development of the same organ has been studied in *Drosophila* by Mainx[1] for some eye colours, by Waletky[2] and by Trapani[3] for the wings, by Semenza[4] for the shape of the eye, and in *Habrobracon* by Clark[5] for some factors affecting the wing-length.

In the present investigation, I have brought together in the same genome distinct mutant genes controlling the same organ, in the homozygotic, and, for the *X*-chromosome, in the hemizygotic state, respectively, so that each gene was able to manifest itself during development. In this way, it is possible to detect if the phenogenetic actions of two genes combined in the same genome and affecting the same character are of such nature as to sum their effects or to exclude one another.

The genes I used are the following: N = Notch (chromosome 1)[6], fa^n = facet notched (chromosome 2), sd^L = Leoni's scalloped (chromosome 1)[7], vg = vestigial (chromosome 2) and blt^S = Semenza's blot (chromosome 2). The latter, which arose spontaneously in the laboratory from a Notch strain, produces a reduction of the wing-size, generally accompanied by an accumulation of hæmolymph, so that the wing assumes the appearance of a sausage; balancers also are smaller; penetrance is complete and viability good. Localization proved that this mutant is an allele of *blt*.

I obtained and examined the following combinations. $N - blt^S$: no interaction, since no individuals appear with both characters. $fa^n - blt^S$: the appearance of the wings indicates a summing of both the genes in question; the wings are inflated, shorter than in blt^S and show at the distal extremity the nicks and the hair clumps peculiar to fa^n; veins are much enlarged, more than in fa^n, and often a little deformed; balancers are reduced; the effects in males and females are the same. $sd^L - blt^S$: no interaction, since no individuals appear with both characters. $vg - blt^S$: wings, very reduced in size, appear as two small balloons; veins are often lacking; balancers are wrinkled or lacking.

These results show that fa^n and vg are quite recognizable in the individual which contains, at the same time, the blt^S gene; but they also show an increase in intensity, while N and sd^L block the accumulation of hæmolymph peculiar to blt^S, so that in the combination the latter does not appear. Another possible explanation is that the combinations $sd^L - blt^S$ and $N - blt^S$ are not viable.

I conclude, therefore, that *vestigial*, $blot^S$ and *facet notched* seem to be more analogous in their action than $blot^S$, *Notch* and $scalloped^L$.

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[3] Trapani, E., *Rend. Ist. Lomb. Sci. Lett., Cl. Scienze*, **76**, 344 (1943).
[4] Semenza, L., *Atti Soc. Ital. Sci. Nat.*, **85**, 5 (1946).
[5] Clark, A. M., *J. Heredity*, **40**, 90 (1949).
[6] See *Drosophila Inform. Service*, No. 23 (1949).
[7] This appeared spontaneously in this laboratory and was found by Miss L. Leoni; for further details, see *Drosophila Inform. Service*, No. 24.

Microclimate Close to the Ground

Recent communications[1,2] have directed attention to the importance to the biologist of the peculiar microclimate on the ground and among ground vegetation. A thin hot layer of air covers the surface of bare earth in sunshine, and among vegetation it is lifted to a height which depends upon the height and density of the vegetation. Measurement of the temperature of this air is difficult: the temperature-profile is steep and is likely to be disturbed by the ventilation of an aspiration thermometer. When using an aspiration thermocouple over bare earth, I have found that the galvanometer reading rises initially to a high value and then falls, suggesting that hot air is being withdrawn and replaced by colder.

There is another approach to this problem. The biologist is primarily interested in the temperature of bodies—animals and plants—which will not as a rule be the same as air temperature. Most of the factors responsible for the temperature of small 'cold-blooded' animals are also responsible for the temperature of inanimate bodies in similar situations, and a study of the latter may be expected to throw some light upon what governs the former and at the same time offer certain experimental amenities. The accompanying table shows the equilibrium temperature of a black metal disk $\frac{3}{4}$ in. diam. and $\frac{1}{8}$ in. thick suspended horizontally in full sunshine at different heights above (*a*) a smooth table; (*b*) a 1-in. clearing plucked in a lawn about 1 in. high; (*c*) a metal sheet 2 ft. square covered with a 'vegetation' of drinking straws 2 in. high spaced at random about $\frac{1}{2}$ in. apart. The temperature of the metal sheet (*c*) could be both measured and varied, and results were obtained: (i) when it was allowed to reach its full temperature; and (ii) when it was cooled by means of the water coil