Lecture 5 - THE RISE OF EVOLUTION (cont'd)

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(subhead) MENDELISM AND SURVIVAL OF THE FITTEST

Mendelism, which has won general acceptance, holds that there is never a blending of the characteristics of parents, but rather a selection from among related qualities. Some of these are designated as dominant, and some as recessive. The dominant ones tend to appear far more often than the recessive, which sometimes lie dormant for many generations before again showing themselves. If the presence of a recessive gene in both parents causes it to appear in an individual, the question naturally arises whether the particular difference is sufficient to affect its possibilities of surviving and producing offspring.

A good example of this is found in a certain type of fruit fly which has a dominant gene producing large spreading wings and a recessive gene producing very small ones. Under ordinary circumstances the dominant characteristic would occur in the great majority of the flies produced. The greater mobility that it provides might enable such flies to gather food more easily than those with less wingspread, so that more of the ones possessing the large wing would tend to survive and reproduce, and in the course of time the recessive gene producing the smaller wing might largely disappear. However, if a group of these insects were to be moved to an area where there was usually a strong wind, tending to blow them out over the ocean, those individuals with the large wing might tend to be blown out to sea and drowned, while those in which the recessive gene had manifested itself might tend to survive and thus in time to become the majority group. In this way the principal of survival of the fittest may sometimes determine changes within a species. Yet no quality can in this way be brought into prominence unless the gene that produces it is already present in the germ

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