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The prevalence of mutations in natural population of *Drosophila melanogaster*

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The evolutionary process is conditioned by the existence of genetic variability. The description of this variability in a population is the first step in studies of evolution and it is necessary to explain its origin and its maintenance and to predict its evolutionary consequences. The aim of this research was to observe the prevalence of mutations in natural population of *Drosophila melanogaster* (fruit fly). One thousand one hundred and fifty-two (1152) *Drosophila melanogaster* flies were randomly collected and observed for the prevalence of physical mutations, of this number, 991 (86.02%) were trapped from the wild population with the prevalence of yellow body mutation occurring at 14.7% (females 14.2% and males 0.5%). 161 (13.98%) were the first filial generation having the prevalence of yellow body mutation occurring at 20.5% (19.3% were females and 1.2% males). The yellow body mutant flies have a defect in their "yellow gene" which is located on the X-chromosome. Since the yellow gene is needed for producing the flies normal black pigment, yellow body mutant flies cannot produce the pigment. It is a non-lethal recessive mutation; hence, flies having such defect survive and pass the defect to their offspring in the subsequent generation.

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