

An allele's chance of fixation is equal to its present frequency

107 vials were set up with 8 male and 8 female heterozygotes (bw/bw^{75})

Eight males and 8 females were then selected randomly in each line, for each of the next 19 generations.



Number of populations 30
0 .00 .13 .25 .38 .50 .63 .75 .88 1.00

Generation 1

2

3

4

5

6

7

8

9

Peter Buri's experiment with brown eye-color mutants in *Drosophila melanogaster*

Generation 11

12

13

14

15

16

17

18

19

.00 .13 .25 .38 .50 .63 .75 .88 1.00

.00 .13 .25 .38 .50 .63 .75 .88 1.00

Frequency of bw^{75} allele

.00 .13 .25 .38 .50 .63 .75 .88 1.00

.00 .13 .25 .38 .50 .63 .75 .88 1.00

Frequency of bw^{75} allele

Allele frequencies diverged randomly, but the average (overall) heterozygosity decreased each generation

Heterozygosity (averaged over 107 populations)
0.0 0.1 0.2 0.3 0.4 0.5

Decrease expected for a population of 9 flies

Decrease expected for a population of 16 flies

0 5 10 15 20 Generation



Decrease expected for a population of 16 flies

3-D views of Buri's data, and of a theoretical prediction

