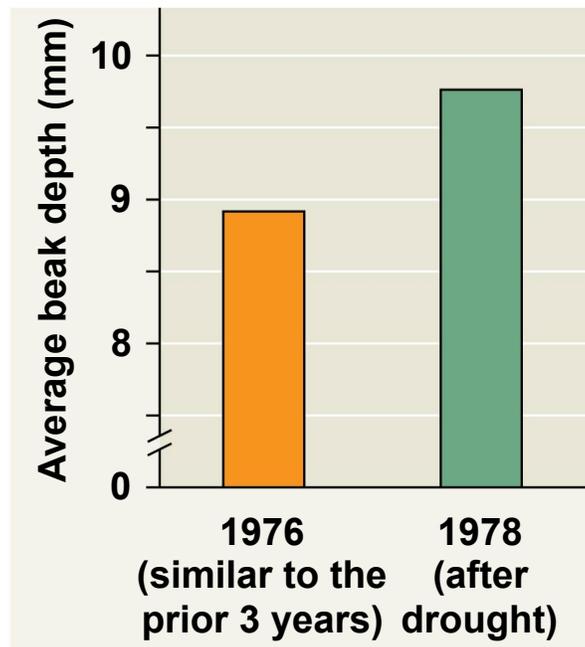




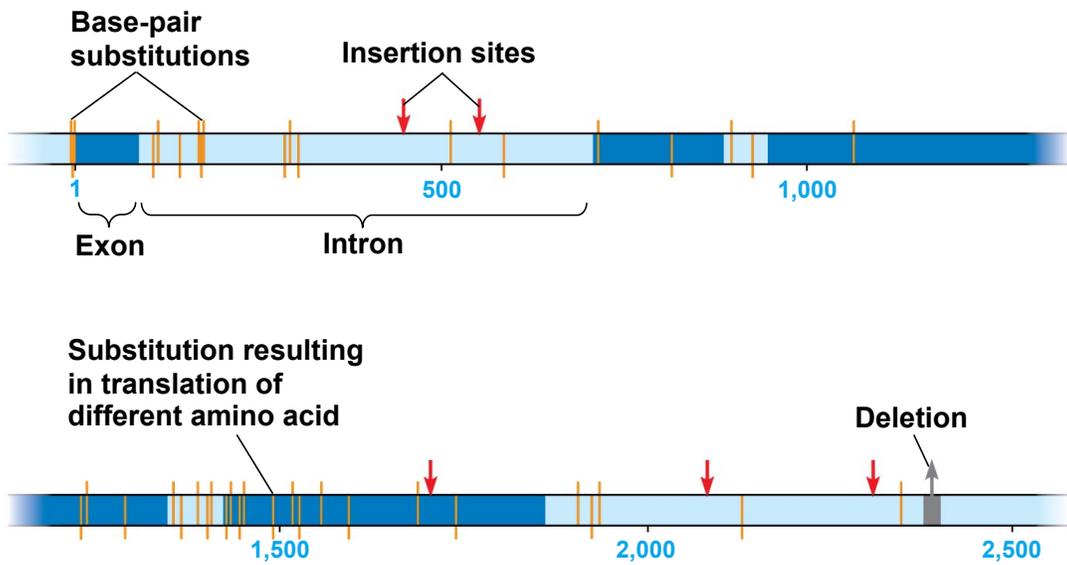
© 2014 Pearson Education, Inc.

1



© 2014 Pearson Education, Inc.

2

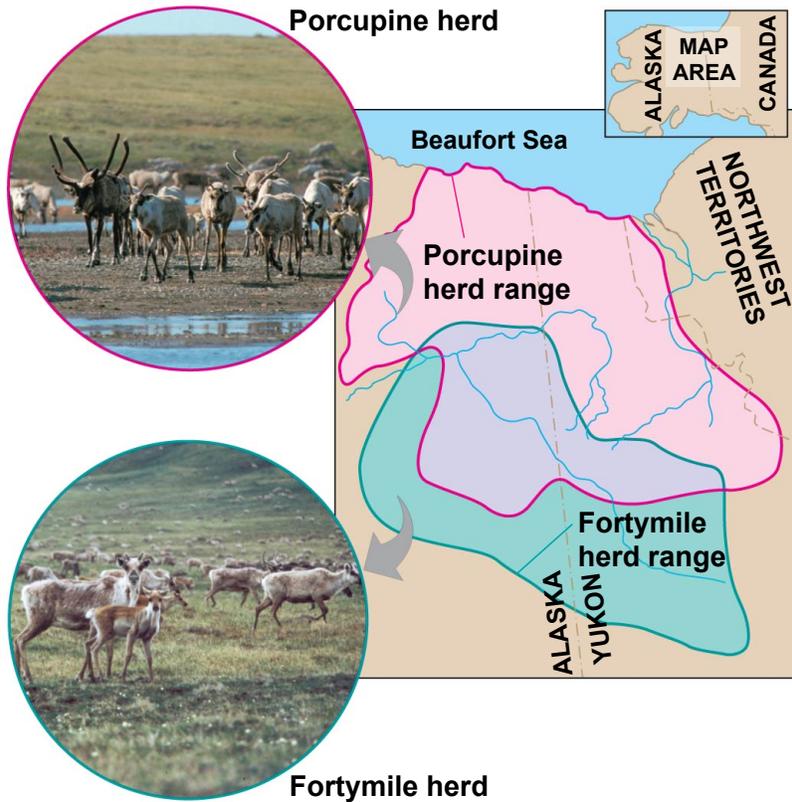


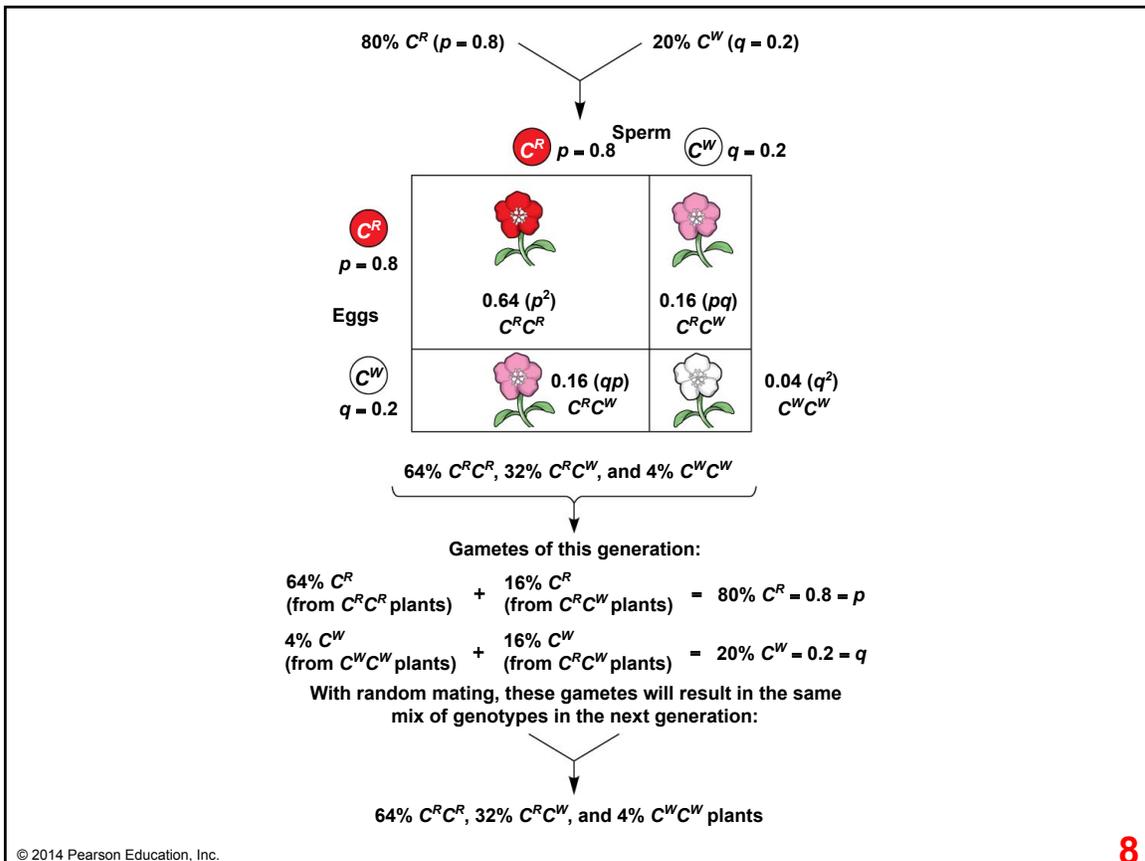
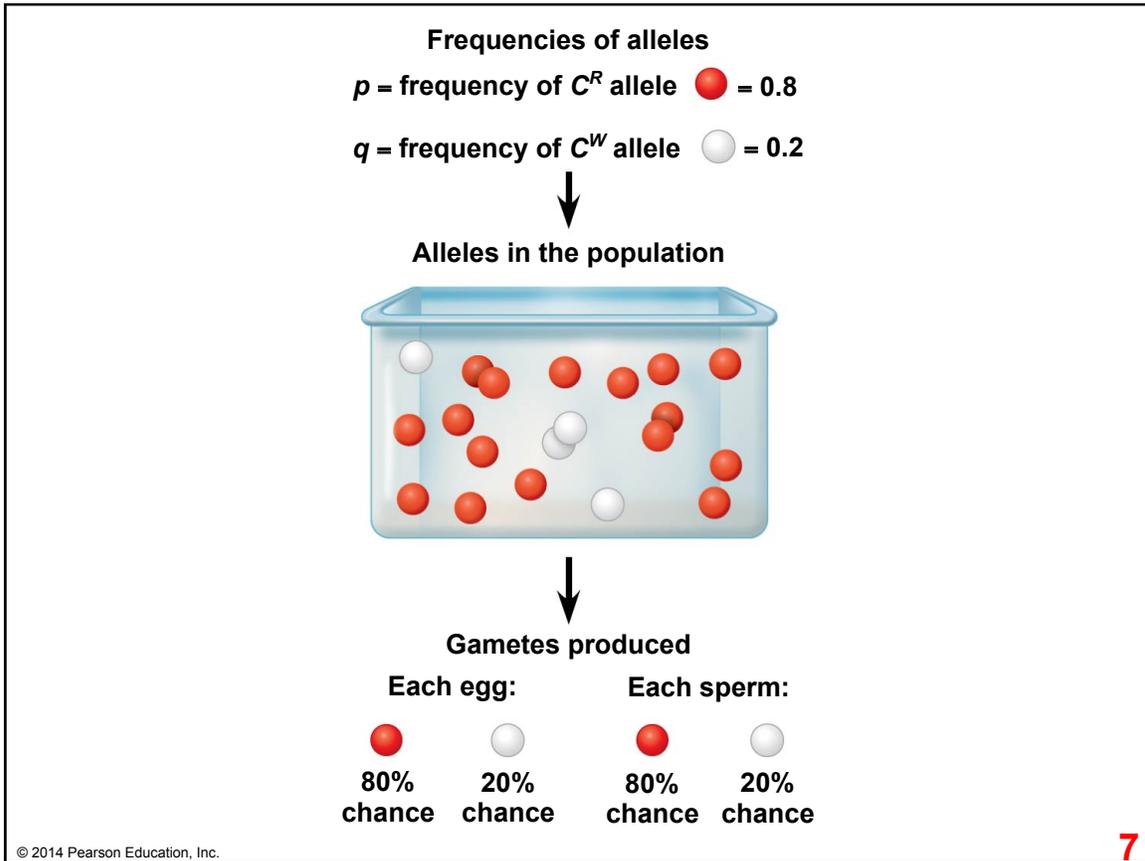


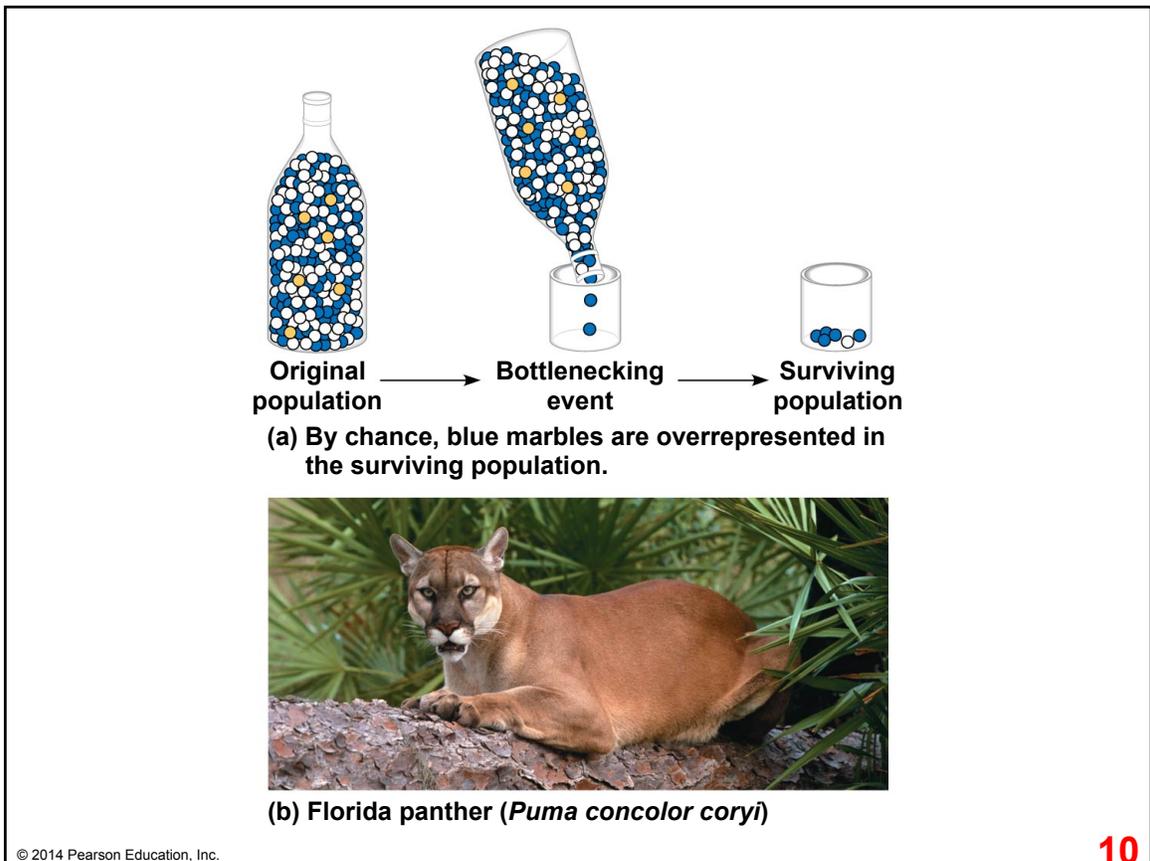
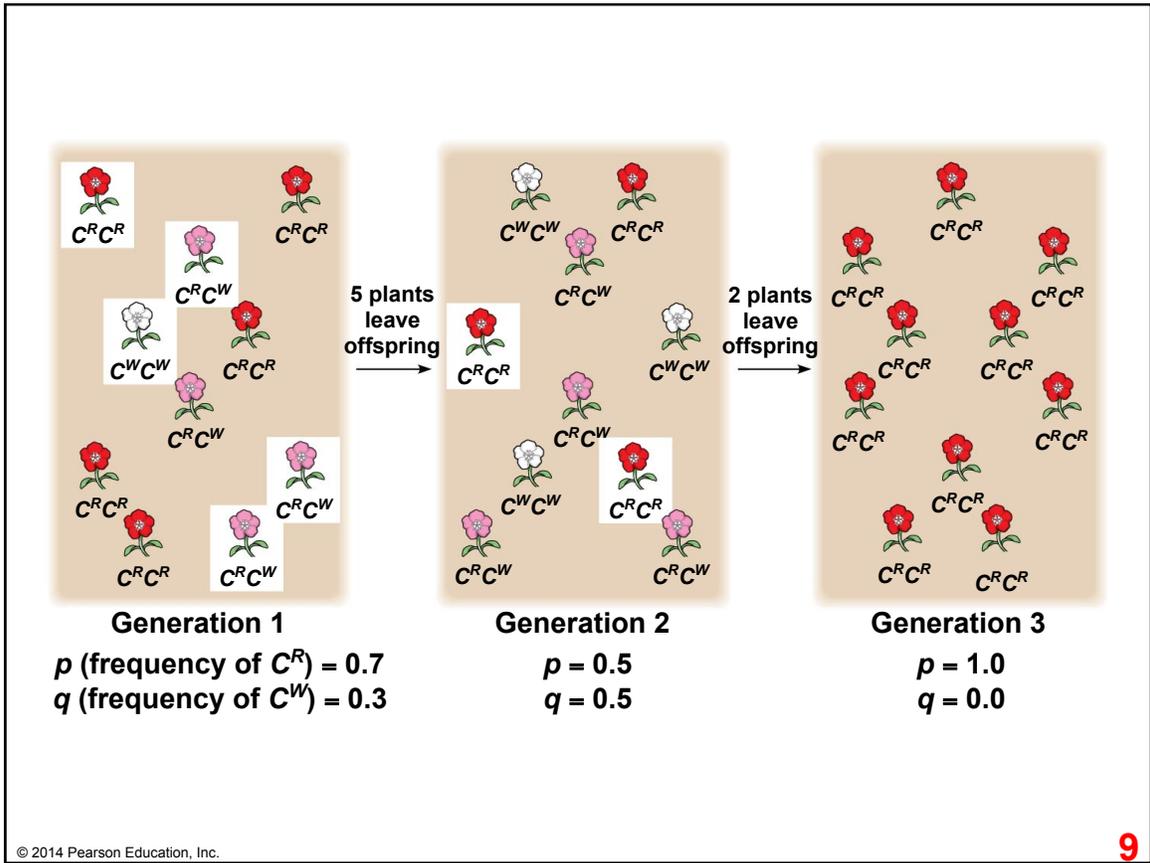
(a) Caterpillars raised on a diet of oak flowers



(b) Caterpillars raised on a diet of oak leaves

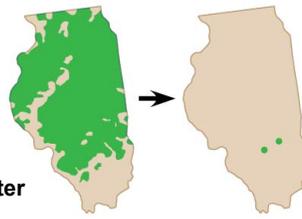








Pre-bottleneck (Illinois, 1820) Post-bottleneck (Illinois, 1993)



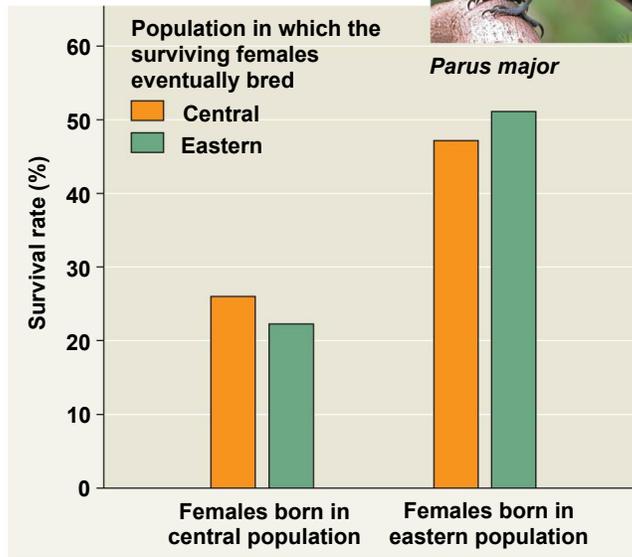
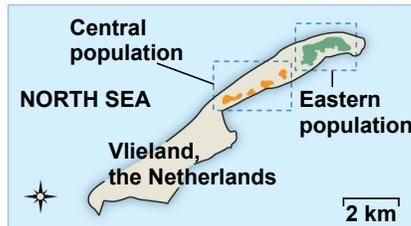
Greater prairie chicken

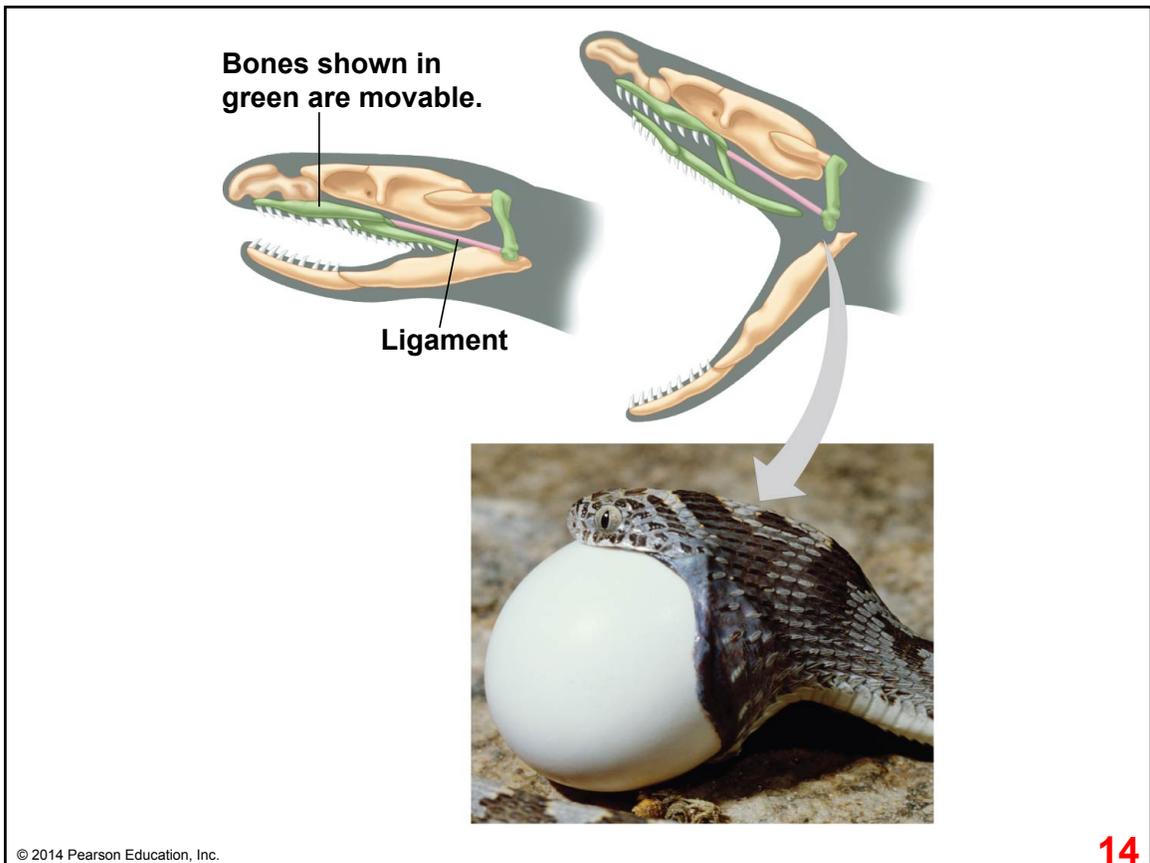
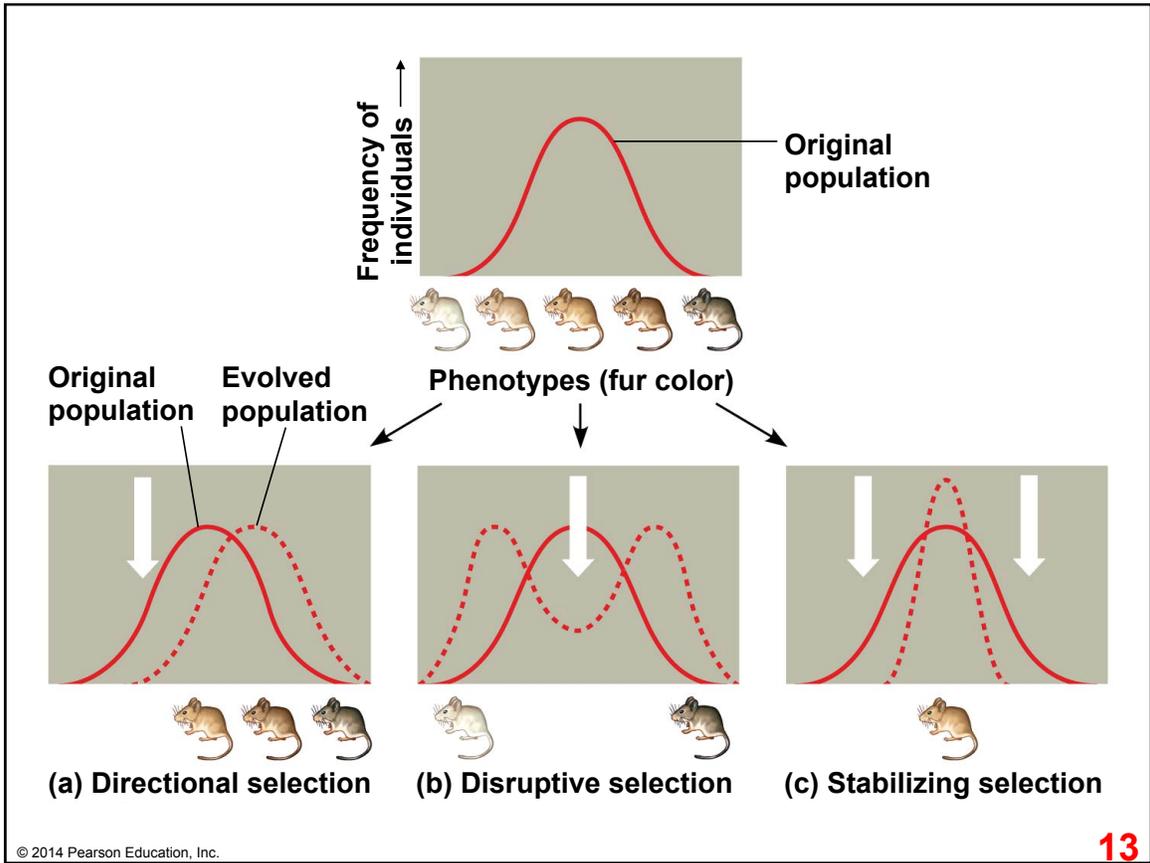
Range of greater prairie chicken

(a)

Location	Population size	Number of alleles per locus	Percentage of eggs hatched
Illinois 1930–1960s	1,000–25,000	5.2	93
Illinois 1993	<50	3.7	<50
Kansas, 1998 (no bottleneck)	750,000	5.8	99
Nebraska, 1998 (no bottleneck)	75,000–200,000	5.8	96

(b)

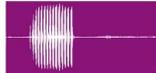






Experiment

Recording of SC male's call



SC male gray tree frog



Female gray tree frog

Recording of LC male's call



LC male gray tree frog

SC sperm × Eggs × LC sperm

Offspring of SC father

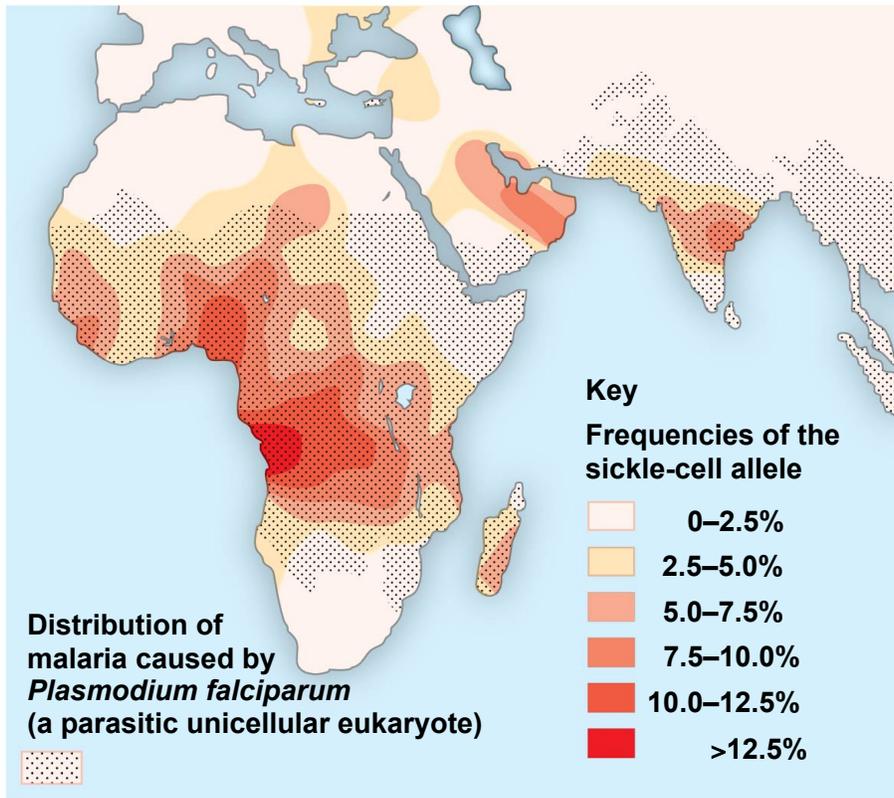
Offspring of LC father

Survival and growth of these half-sibling offspring compared

Results

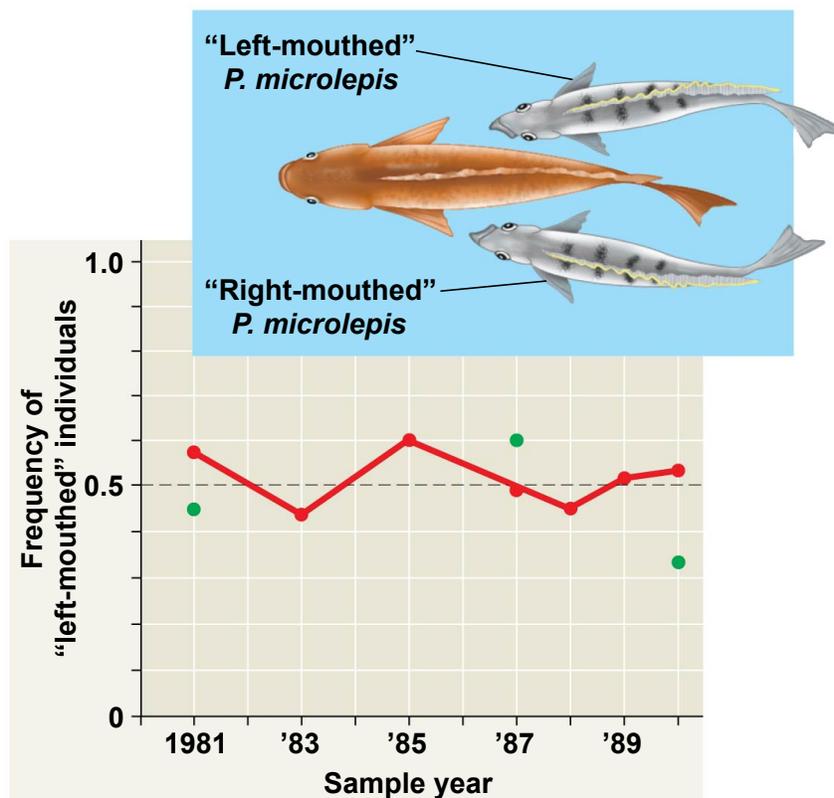
Offspring Performance	1995	1996
Larval survival	LC better	NSD
Larval growth	NSD	LC better
Time to metamorphosis	LC better (shorter)	LC better (shorter)

NSD = no significant difference; LC better = offspring of LC males superior to offspring of SC males.



© 2014 Pearson Education, Inc.

17



© 2014 Pearson Education, Inc.

18

