Sexual Selection

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Selecting a Partner for Mating

Charles Darwin's theory of sexual selection, explains about the survival of many species, including humans. Like natural selection,



xual selection is widely accepted by all biologists. The impact of sexual selection on evolutionary

development can be explained with many examples.

<u>Sexual selection</u> is a "special case" of natural selection. Sexual selection explains the ability of an organism to choose its mate and copulate with it.

Charles Darwin defined Sexual Selection as: "sexual selection depends on the success of certain individuals ove



r others of the same sex, in relation to the propagation of the species. It is a struggle between

individuals of one sex, generally the males, for the possession of the other sex".

Sex has played an important role in the development of our many cultures and has ultimately done the same for the development of our civilization.

Two ways of Selection

1. **Male competition:** Male chooses females and mate with them for long time and not allowing other males to mate with the chosen female and after the fertilization, male passes the genes to next generation.



2. **Female choice:** Females choose the male partner and mate with male for longer duration and allow the eggs to<u>mate</u> with the desired sperm. This way they can pass the genes to next generation.

Two forms of sexual selection

Intrasexual selection: 'Male-male competition' - in which members of the less limited sex compete aggressively among themselves for access to the limiting sex. Male-male competition may take the form of sperm competition. In this case, a female may mate with more than one male, the fittest sperm—that belonging to the fittest male—is most likely to fertilize the ovum.
Intersexual selection: -'mate choice' or 'female choice' in which males compete with each other to be chosen by females. This defines most human sexual selection.

Sexual Dimorphism

- It is the differences in secondary sexual characteristics between males and females
- It can be size difference, or structural differences like horns or color patterns.

Some examples

- antlers in male deer only.
- brighter coloration in most male birds only
- <u>peacock</u>'s colorful tail feathers, peahen lacks
- <u>Neolamprologus callipterus</u> males are up to 30 times the size of females.
- female <u>spiders</u> are larger than males.
- hairlessness in human females.



Sex is not a simple phenomenon to be overlooked. It decides many evolutionary changes. Darwin provides ample evidence of sexual selection. But many were criticized by biologists, but overwhelming evidence points to the strongest, fittest organisms being those that get to mate. But still we all must agree that sexual selection is an important process in the making of evolution.

Want to know more about sexual selection? Click here to schedule live online session with e Tutor!

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Reference Links:

- <u>http://evolution.berkeley.edu/evosite/evo101/IIIE3Sexualselection.shtml</u>
- <u>http://thinkersbebo.com/Articles/sexual_selection.htm</u>
- <u>http://en.wikipedia.org/wiki/Sexual_selection</u>
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- http://www.stanford.edu/group/stanfordbirds/text/essays/Sexual_Selection.html

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