

Shake a Tail Feather: Sexual Selection in Peacocks

Background

*"The sight of a feather in a peacock's tail,
whenever I gaze at it, makes me sick."*

That is what Charles Darwin wrote when first thinking about the showy and elaborate tail feathers of the male peacock. If traits that aided in survival were selected for and were more likely to be passed on to the next generation, how was it that evolution by natural selection could produce something like the brightly colored and elaborate tail feathers of a peacock? How could such traits evolve when they are more noticeable to predators and make fleeing from them more difficult? Clearly the tail feathers of the peacock were a problem for his idea of natural selection. Or were they?



Darwin began to wonder if there was more to his idea of selection than just traits being selected due to increasing an organism's chances of survival. To pass on traits to the next generation, a peacock needs to survive AND reproduce. If a trait more successfully attracts mates and increases the number of offspring that an individual produces, that trait will be passed on to the next generation. That idea is one that Darwin eventually added to his idea of natural selection and it came to be known as sexual selection. If more elaborate tail feathers attract more peahens, then this sexual selection could explain the evolution of such a flashy ornament for peacocks.

Dataset

Darwin never had the data to test his idea of sexual selection in peacocks, but a now [classic study done in 1991](#) did just that. In the study, researchers counted the number of total eyespots on the tail feathers of individual peacocks. They then observed free-living peacocks and counted the number of peahens that each individual mated with.

Variables

Number of Eyespots - Total number of eyespots on a peacocks tail

Number of mates - total number of mates a peacock held

Activity

1) Make a graph with these data to see if the researchers' prediction that peacocks with more total eyespots on their tail feathers will get more mates is supported or not. Screenshot your graph here:

2) Do these data support Darwin's idea of sexual selection? Provide evidence for your "yes" or "no".