

SEXUAL DIMORPHISM AND DIFFERENCES IN NATURAL SELECTION IN THE TWO SEXES

Many animals exhibit physical differences based on their sex—a phenomenon known as sexual dimorphism, which is driven by distinct selective pressures. Studying the forces that shape this dimorphism is particularly challenging, as traditional methods for documenting natural selection often fall short. A paper in *PNAS* (1) tackles this issue using a "real-time" approach, leveraging data from the UK Biobank. The authors found evidence of a life history tradeoff between survival and fecundity, with opposing effects on males and females. Their concluding remark suggests that "sex-differential selection may be an inevitable consequence of reproduction involving separate sexes."

In 1871 Darwin, in his book *The Descent of Man and Selection in Relation to Sex*, proposed that male and female differences arise from sexual selection, with males often evolving traits that enhance their reproductive success (*fitness*) through competition or attractiveness, while females prioritize traits that improve survival and care for offspring.

1. <https://www.ncbi.nlm.nih.gov/pubmed/39302970>