

Study: Sexual selection comes at a cost

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Canadian scientists say they have discovered that seeking out the most attractive mate may be unhealthy for any offspring.

Using a "virtual fruit fly dating game," Queen's University biology Professor Adam Chippindale and graduate student Alison Pischedda found mating with a "fit" partner actually leads to dramatically lower rates of reproductive success in the next generation.

The findings, they said, suggest on average, the lowest quality couple produced the best offspring, while the highest quality pair produced the worst offspring.

The scientists wanted to discover what occurs as a result of sexual selection -- the Darwinian process by which organisms compete for, and choose, their mates. In some traditional models, sexual selection is the search to provide offspring with "good genes" to increase their reproductive success.

The study's findings support the idea that sexually antagonistic genes exert powerful effects and mostly inhabit the X chromosome, which only females pass onto sons. So when females choose successful mates they will see no benefits to sons and will only incur the cost of less-fit daughters, said Chippindale.

The research appears in the November edition of PLoS Biology.

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