

Study shows value of sexual reproduction versus asexual reproduction

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Living organisms have good reason for engaging in sexual, rather than asexual, reproduction according to Maurine Neiman, assistant professor of biology in the UI College of Liberal Arts and Sciences and researcher in the Roy J. Carver Center for Genomics.

In an article published in a recent issue of the journal *Molecular Biology and Evolution*, she and her colleagues, including John M. Logsdon Jr., associate professor of biology, examined the theory that [sexual reproduction](#), while requiring more time and energy than asexual reproduction, is also much more common among living organisms and, therefore, must be very beneficial.

The study looked at sexual, as well as asexual, varieties of a New Zealand freshwater snail, *Potamopyrgus antipodarum*, by sequencing mitochondrial genomes and found that the sexually reproducing [snails](#) had accumulated harmful DNA mutations at about half the rate of the asexual snails.

"This is the first study to compare mutation accumulation in a species where sexual individuals and asexual individuals regularly coexist, and thus provides the most direct evidence to date that sex helps to counter the accumulation of harmful mutations," said Neiman.

Neiman plans to continue her [evolutionary biology](#) research such that a clearer understanding of the advantages of sex will offer a better understanding of the value of preserving [genetic diversity](#) within and

among populations, species, and ecological communities.

Provided by University of Iowa

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