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Forty million years of solitude

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The loss of sexual reproduction is seen as an evolutionary **dead end**, but researchers have seen no sign of sex in the four families, 18 genera and 360 species of the class Bdelloidea. In the 19 May *Science*, Welch and Meselson analyze the DNA sequences of bdelloids and report that these tiny protostomes have, indeed, survived without sex (*Science* 2000, **288**:1211-1215). Asexual reproduction with no exchange between non-sister chromosomes has created a telltale and extreme sequence divergence (up to 50% for degenerate positions) between the two alleles in a single organism. The hunt is now on for further signs of asexuality - such as the disabling of genes for spermatogenesis and meiosis - and for clues as to how bdelloids resist mutagenesis and parasites without the genome shuffling that comes with sex.

References

1. Science, [<http://www.sciencemag.org/>]
2. Evolution: contemplating life without sex.