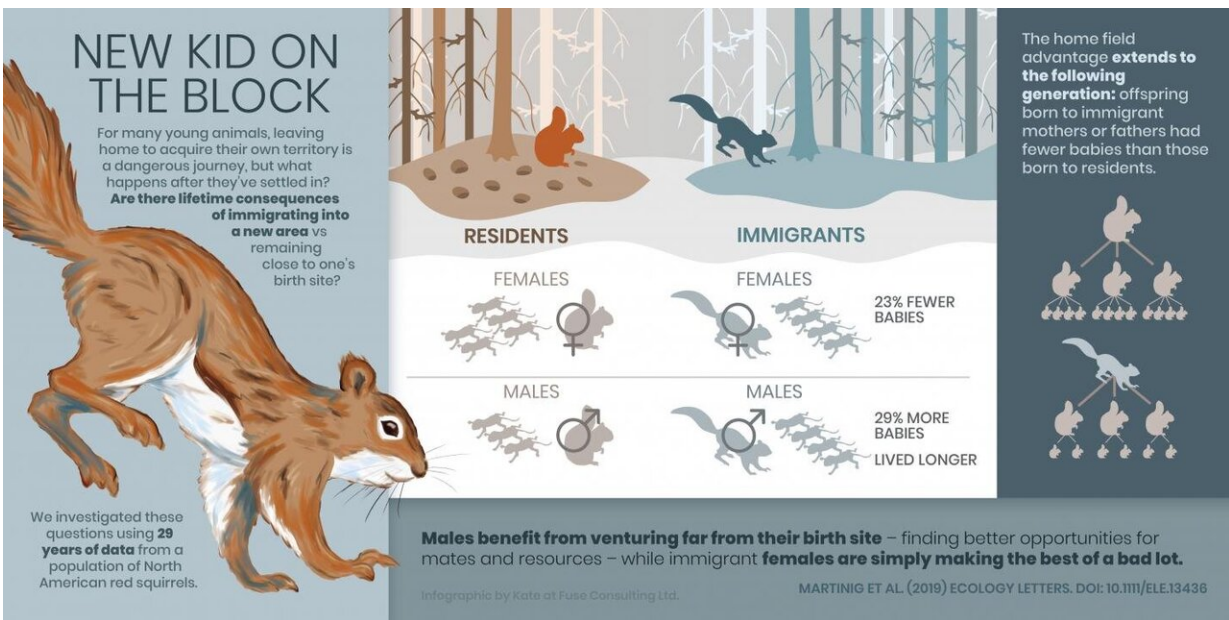


Leaving home is beneficial for male squirrels but not for females, study shows

December 13 2019, by Katie Willis



A new study by University of Alberta ecologists is shedding new light on the effects of migration on squirrels. Graphic credit: Kate Broadley Credit: Kate Broadley

In the world of squirrels, moving away from your home turf has better outcomes for males than for females, according to a new study by University of Alberta ecologists.

The study uses 30 years of data on a [population](#) of North American [red](#)

[squirrels](#) in Yukon, Canada, examining how the number of offspring and total lifespan differed between squirrels who lived in the same area in which they were born and those who were newcomers to the area. And the results show that sex plays a major role.

"The benefits to living in a different population than you were born are sex-dependent," explained April Martinig, Ph.D. student in the Department of Biological Sciences and lead author on the study. "Males benefit from moving away, whereas [females](#) do not. We also found that the decision to move away or stay at home has an impact on offspring."

New research shows that male squirrels who move outside of the population they were born to live longer and have more offspring.

For male squirrels, moving away is beneficial because they no longer need to compete with their siblings for limited resources, such as mates or food. Males also benefit, because female squirrels prefer to mate with newcomer [males](#). Female squirrels, on the other hand, do not reap the same benefits, and instead lose out on the support of nearby family—something that male squirrels don't receive.

"Squirrels live in a world where there are only so many 'empty apartments' to live in," said Martinig, who is conducting her Ph.D. studies under the supervision of Professor Stan Boutin. "Sometimes one sibling is allowed to stay at home—so everyone else must go. If there are no vacancies nearby, squirrels then have no choice but to move further away. This is what females face: losing the benefits of having family nearby."

"Movement is a crucial component of species persistence," added Martinig. "Understanding how and why certain individuals move is key to protecting populations as climate change impacts their distribution on the landscape."

The paper, "The new kid on the block: Immigrant males win big whereas females pay fitness cost after dispersal," is published in *Ecology Letters*.

More information: April Robin Martinig et al, The new kid on the block: immigrant males win big whereas females pay fitness cost after dispersal, *Ecology Letters* (2019). [DOI: 10.1111/ELE.13436](https://doi.org/10.1111/ELE.13436)

Provided by University of Alberta

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