

How badgers get ahead in game of life

October 15 2015, by Thomas Deane

New research has shown that badgers, one of Ireland's most iconic wild creatures, roll the dice in their sex lives to gain an all-important edge in the game of life.

Not only are badgers able to suspend the implantation of an embryo following fertilisation, but they are also able to carry babies conceived at different times, and even – in all probability – fathered by different males.

This incredibly rare strategy means females can mate with the dominant male in their territories as well as a pair of hunky guys in [neighbouring areas](#), all of whom are likely to pass on desired genes to their young. Embryos can be implanted a long time after fertilisation, which enables the babies to be brought to term at a time of environmental plenty. And, when they are born, they will be afforded the protection of the [dominant male](#) in the social group, even though some (or all) of them might not be his.

The amazing research, conducted by zoologists from the School of Natural Sciences at Trinity College Dublin, vets at UCD, and scientists at the Department of Agriculture, Food and the Marine (DAFM), has just been published in leading international journal *PLOS ONE*. The journal article can be viewed [here](#).

Associate Professor of Zoology at Trinity, Dr Nicola Marples, co-authored the paper. She said: "It's amazing to think that only five species in the world have evolved this ability to maintain several different

embryos at different stages of development at the same time. It seems such a useful trick for the female to play!"

Understanding when and why badgers move between territories provides key insights into how populations mix. This is extremely valuable information from a conservation perspective, because it may help researchers design an effective TB vaccination programme.

PhD Researcher in Zoology at Trinity, and co-author on the paper, Lynsey Stuart, added: "Studying badger movement is imperative to improving our knowledge of the diseases they carry, including tuberculosis. This type of research will aid in the effective delivery of a vaccine against tuberculosis, helping [badgers](#) and cattle alike."

Badgers can harbour TB and inadvertently pass the disease to cows, which results in cattle farmers losing millions of euro each year. As such, a well-designed vaccination programme should provide a win-win situation.

More information: Leigh A. L. Corner et al. Reproductive Biology Including Evidence for Superfetation in the European Badger *Meles meles* (Carnivora: Mustelidae), *PLOS ONE* (2015). [DOI: 10.1371/journal.pone.0138093](#)

Provided by Trinity College Dublin

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