

## EDITOR'S NOTE

# 'A review of extinction in experimental populations' by Blaine Griffen and John Drake

Many populations of animals have gone extinct in recent decades. Continuing habitat fragmentation, habitat loss and global change mean that with each passing year the risk of extinction increases for many other populations. Preventing extinction is a key objective of ecologists and conservation biologists. It is, however, difficult to study this in the wild because each population goes extinct only once. True replication is impossible and this makes the identification of the relative contribution of genetic, ecological and demographic factors challenging. For this reason, animal ecologists study extinction dynamics using replicated populations in the laboratory.

On pages 1274–1287 of this issue, Blaine Griffen and John Drake provide a synthetic review of experimental studies of extinction dynamics. Using the Web of Science they identified 53 laboratory studies of extinction. A review of these papers has highlighted some generalities, including the important role of migration. Limited migration can decrease a population's likelihood of extinction, while high levels can increase it. This is because high levels of migration mean linked populations fluctuate synchronously, increasing the chance that all of them go extinct simultaneously.

As well as synthesizing generalization, the review identifies important gaps that experimental studies have not widely addressed, as well as providing very useful suggestions for future work. Experimental studies have provided considerable insight into the *modus operandi* of extinction, but several questions have not been addressed. If the recommendations for future work proposed by Griffen and Drake become the subject of the next tranche of experimental studies, our understanding of extinction and our ability to prevent it will increase considerably.

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