

French male bears in immediate need of more females

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The population of brown bears (*Ursus arctos*) in France is now so small that the species might become extinct in the near future. However, there is new hope in the form of new research published October 28 in the open-access, peer-reviewed journal *PLoS ONE*, which suggests that relocating new bears doesn't just boost the population size but can also reverse some of the causes of the population decline.

"Our results suggest that having a viable bear population in France requires further translocations. In particular, male bears need more females," says Guillaume Chapron from the Grimsö Wildlife Research Station, Swedish University of Agricultural Sciences, Sweden and colleagues from the Washington State University, USA, and the Office National de la Chasse et de la Faune Sauvage, France.

French brown bears are currently found only in the Pyrénées mountains in two sub-populations: the growing central population, created from a previous translocation and the endemic western one, which is believed to be in decline because of excessive human-caused mortality and inbreeding.

The researchers analyzed field data collected from 1993 to 2005 and found that the western sub-population had much lower reproductive success than the central sub-population. They suggest this could be the consequence of the western sub-population being inbred or having a male-biased sex ratio. In species with extended parental care, a male-biased sex ratio can induce sexually selected infanticide, a behavior in

which males attempt to kill unrelated cubs to induce estrous in females, maximizing their opportunity to breed.

Chapron and his colleagues used a population model to compute how many [bears](#) should be released to ensure viability, and showed the population could recover provided an adequate number of new females are translocated. The most recently collected field data will now be used to update their population model.

These findings are also important for conservation biology more generally. The usual recommendation when planning a translocation is that it should not take place until the causes(s) of the decline has been reversed. The opposite is true, according to Chapron and colleagues, who suggest that a translocation could take place, even if the decline has not yet been reversed, if the translocation itself removes the biological mechanisms behind the decline.

More information: Chapron G, Wielgus R, Quenette P-Y, Camarra J-J (2009) Diagnosing Mechanisms of Decline and Planning for Recovery of an Endangered Brown Bear (*Ursus arctos*) Population. [PLoS ONE](#) 4(10): e7568. [doi:10.1371/journal.pone.0007568](https://doi.org/10.1371/journal.pone.0007568)

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