Packs of wolf-dog hybrids threaten europe's wolves

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"Swarms" of wolf-dog crossbreeds could drive Europe's wolves out of existence, according to the lead author of new research. Such hybridisation—driven by human activities that destroy habitats and mean

wolves encounter more and more free-roaming dogs—threatens the "genetic identity" of wolves.

The study compares the views of more than 40 scientists and warns that a lack of engagement and agreement could hamper efforts to tackle wolf-dog hybridisation. The findings suggest most scientists agree on the nature of the problem, but are divided on how to deal with it.

"We need to address this issue before wolf-dog hybrids backcross with wolves to the extent that wolf populations will be lost to hybrid swarms, and the conservation of wild populations will become unfeasible," said lead author Valerio Donfrancesco, of the Centre for Ecology and Conservation on the University of Exeter's Penryn Campus in Cornwall.

"In this paper, we argue that scientific agreement is crucial to encourage decision-makers to act, and to raise awareness about this conservation issue in society at large.

"The fact that we know so little about the ecology, behaviour and social acceptance of the wolf-dog hybrids adds a layer of concern to the issue."

The study, which allowed scientists to share their views anonymously, revealed agreement that people should be educated about the impact of free-roaming dogs, and that governments should remove wolf-dog hybrids from small and recovering wild wolf populations.

But scientists were divided on issues such as how to remove hybrids and free-roaming dogs, and whether they should be kept captive, sterilised and released or killed.

Donfrancesco said: "The disagreements emerged from diverging ethical values between scientists of different backgrounds, such as ecologists and geneticists, from the lack of data on the effectiveness of different

interventions, and from the worry of some scientists that on practical grounds allowing the removal of hybrids would open a legal loophole for the killing of wolves."

Co-author Paolo Ciucci, of the Sapienza University of Rome, said: "The management of hybrids and wolf-dog hybridisation should not be a taboo topic, especially within the scientific community.

"There are margins to develop further consensus among scientists if further research addresses topical issues such as the effectiveness and the feasibility of control measures and their social acceptability.

"Scientists should not avoid the problem just because its management appears overly complex."

Co-author Dr. Nibedita Mukherjee, from the University of Exeter, added: "We hope that by highlighting areas of disagreement and why they occur, we will be able to build a more unified scientific opinion, and aid an effective management of this urgent issue."

An estimated 17,000 wolves live in Europe, in populations of varying sizes in countries as far apart as Spain, Greece and Finland.

More information: Valerio Donfrancesco et al. Unravelling the Scientific Debate on How to Address Wolf-Dog Hybridization in Europe, *Frontiers in Ecology and Evolution* (2019). DOI: 10.3389/fevo.2019.00175

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