XXIX International hamster workgroup meeting 2022

Introduction of captive bred *Cricetus cricetus* from 2019 to 2021 in Widooie: is there any hope for the last Belgian population?

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Abstract

The first European hamster Species Protection Program ran from 2015 to 2021. Within this program of the Flemish government, annual introductions of captive bred hamsters into the population in Widooie were planned from 2019 onwards. Monitoring of the demographic parameters of introduced individuals and a preliminary genetic screening was carried out to evaluate the conservation actions. For this, radio transmitters and cameras were used during 3 consecutive years to monitor 52 introduced animals in terms of movements, survival, and reproductive success. The survival rate of introduced males was significantly lower than findings in literature. Lack of local optimal habitat with connecting elements is the major issue in this matter. The reproductive data show that the females in Widooie produce few litters in a season. Also, the number of pups per litter was far too low to keep the population dynamics stable in this prey species, let alone grow. A possible hypothesis is that the female animals can consume too little animal proteins (in the form of bottom-dwelling invertebrates) in the run-up to the reproduction period, which could endanger pregnancy and lactation. Preliminary results of the genetic screening through hair samples revealed a loss in alleles from the breeding to the wild population. A total genetic screening of the population will determine the actions that have to be taken to maximize genetic diversity in the field.