The translocation of wild Eurasian beavers (*Castor fiber*):

Process and success rates

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Human-wildlife conflict









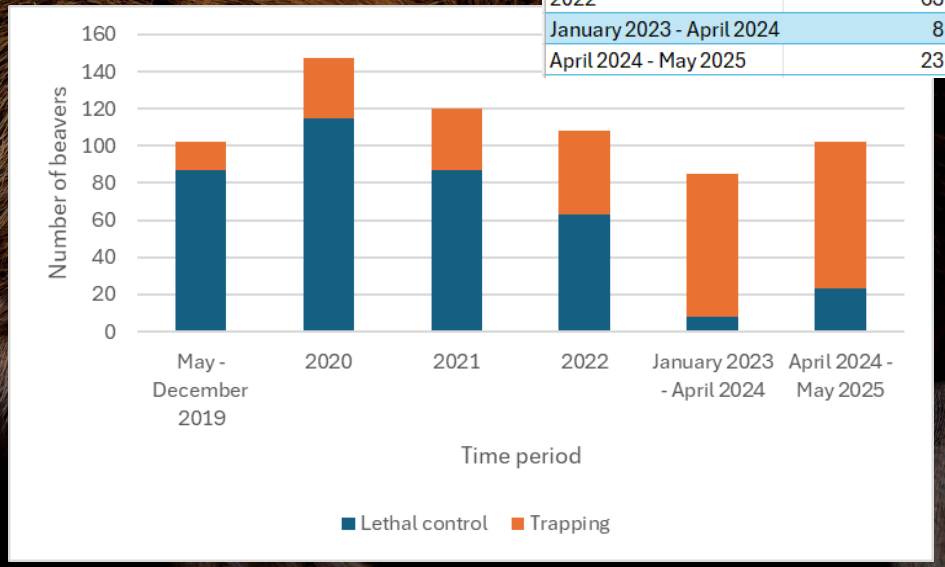
not just overseas…

Eurasian beaver (*Castor fiber*)

- Returned to wild in 2009 in Scotland after being extinct since 16th century
- Now a European Protected Species in Scotland
- Estimated 2000+ beavers in Scotland
- Major mitigation (culling & translocation) overseen by NatureScot
- Translocation is a humane alternative to licenced lethal control



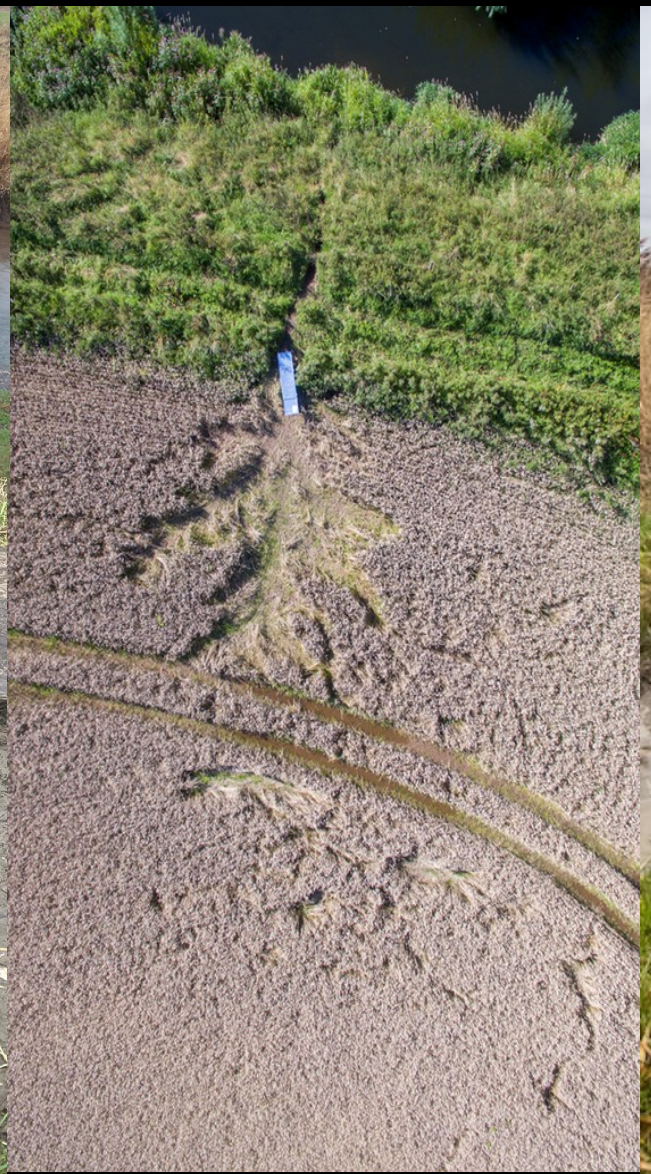
Year	Lethal control	Trapping
May - December 2019	87	15
2020	115	32
2021	87	33
2022	63	45
January 2023 - April 2024	8	77
April 2024 - May 2025	23	79



CONFLICT









MITIGATION HIERARCHY







TRAPPING AS A LAST RESORT



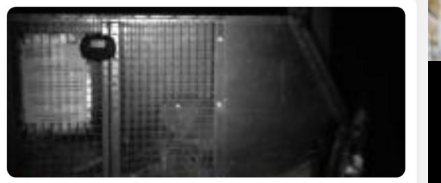


SITE : Dalguise

DEPARTMENT : Scotland Trapping

Photo taken by PPE00596 12-Sep-2025, 10:57 PM

Source: Camera triggered



SITE : Dalguise

DEPARTMENT : Scotland Trapping

Photo taken by PPE00596 12-Sep-2025, 10:57 PM

LOG INSPECTION





Translocation

>350 beavers have been translocated since August 2019

- Trapped
- Quarantined in purpose-built facilities at Five Sisters Zoo in family groups
- Veterinary examination under anaesthesia and disease testing
- Welfare assessments and CCTV monitoring
- Translocated to licensed release sites
- Post-release monitoring















BEAVER TRUST

Five Sisters ZOO

IMPORTANCE OF FAMILY

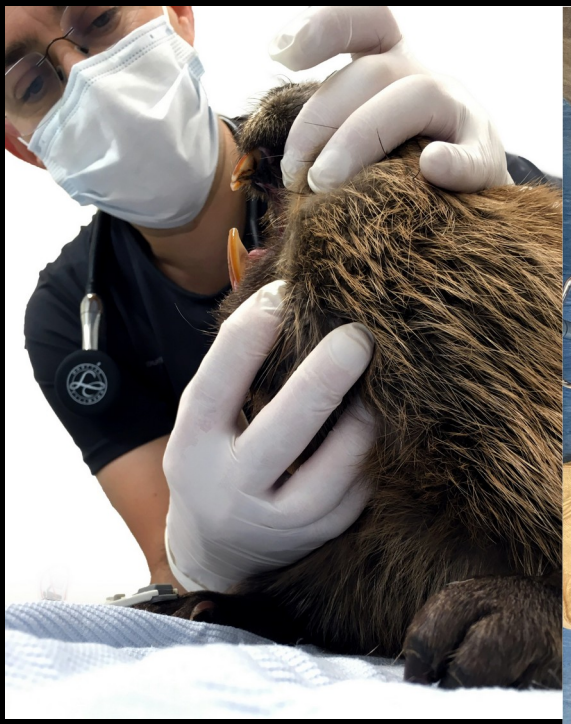








VETERINARY & CAPTIVE CARE









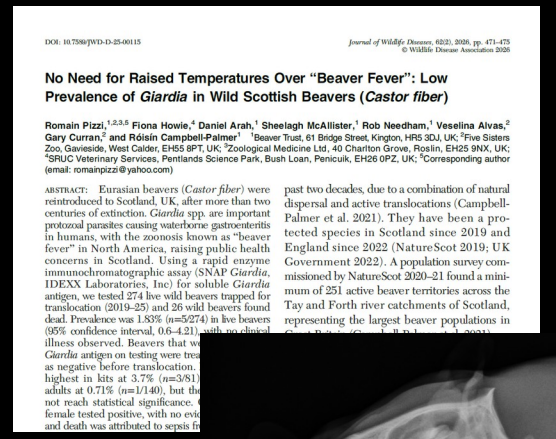






Disease screening of beavers since 2019:

- Licence by NatureScot & Natural England
- **352** Beavers examined to date:



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No Need for Raised Temperatures Over "Beaver Fever": Low Prevalence of *Giardia* in Wild Scottish Beavers (*Castor fiber*)

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ABSTRACT: Eurasian beavers (*Castor fiber*) were reintroduced to Scotland, UK, after more than two centuries of extinction. *Giardia* spp. are important protozoal parasites causing waterborne gastroenteritis in humans, with the zoonosis known as "beaver fever" in North America, raising public health concerns in Scotland. Using a rapid enzyme immunochromatographic assay (SNAP *Giardia*, IDEXX Laboratories, Inc) for soluble *Giardia* antigen, we tested 274 live wild beavers trapped for translocation (2019–25) and 26 wild beavers found dead. Prevalence was 1.83% (n=5/274) in live beavers (95% confidence interval, 0.6–4.21) with no clinical illness observed. Beavers that w... *Giardia* antigen on testing were trea... as negative before translocation. ... highest in kits at 3.7% (n=3/81)... adults at 0.71% (n=1/140), but th... not reach statistical significance. ... female tested positive, with no evi... and death was attributed to sepsis fr... past two decades, due to a combination of natural dispersal and active translocations (Campbell-Palmer et al. 2021). They have been a protected species in Scotland since 2019 and England since 2022 (NatureScot 2019; UK Government 2022). A population survey commissioned by NatureScot 2020–21 found a minimum of 251 active beaver territories across the Tay and Forth river catchments of Scotland, representing the largest beaver populations in ...

Live beaver health screening under anaesthesia currently includes:

- Full physical examination & dental examination
- Microchip identification
- Haematology & serum biochemistry
- Faecal parasitology and bacteriology
- 6-lead ECG & cardiac ultrasound
- Abdominal ultrasound exam
- Radiography (x-rays) as required
- Disease screening, as per Disease Risk Analysis (DRA)
- Investigation of any suspect infections or wounds
- Biobanking of blood , fur, faeces, saliva, and foot swabs







BEAVER TRUST

Five Sisters ZOO

Disease screening of beavers since 2019:

Wild beaver population appears in excellent health:

- 8 beavers required euthanasia due to pre-existing trauma (fractures, etc)
- Adult beaver post-translocation **survival** to one year is **91.4%** (95%CI 86.3-96.5%)
- While 29.1% of beavers had coccidia oocysts in their faeces
  – none had any clinical illness
- *Appears to be minimal infectious disease impact on wild beavers*

Disease risk to humans and other animals:

- 2.2% of tested beavers had *Leptospira* spp. antibody titres > 1:1600 indicating likely recent infection (WOAH guidelines)
  – none had any clinical illness
- Giardia ("*Beaver Fever*") prevalence of only 1.83% in live beavers
  – none had any clinical illness
- No beavers tested were positive for Salmonellosis, E. coli, or *Mycobacterium avium paratuberculosis* (Johne's disease).
- Other zoonosis (*Yersinia*, *Giardia*, *Cryptosporidium) had low prevalence <1%*



WELFARE IN CAPTIVITY

Beaver Personality Assessment

Beaver ID (use "Test" if just trying this out)

Your name

Your email address (only first assesment)

Date

MM/DD/YYYY

Observation this assessi (tick all that apply)

- [ ] Trapping /transport
- [ ] Captive care, feedinç

PLAYFUL (Initiates and engages in play behaviour [seemingly meaningless, non-aggressive behaviour] with objects and/or other beavers)

1	2	3	4	5	6
7	8	9			

SELF-ASSURED (Moves in a seemingly confident, well-co-ordinated and relaxed manner)

1	2	3	4	5	6
7	8	9			

SMART (Learn quickly to associate certain events and appears to remember for a long time)

1	2	3	4	5	6
7	8	9			

SOLITARY (Spends time alone; avoids company) - leave blank if on its own





Wild animal translocations: animal welfare risk assessment guidance

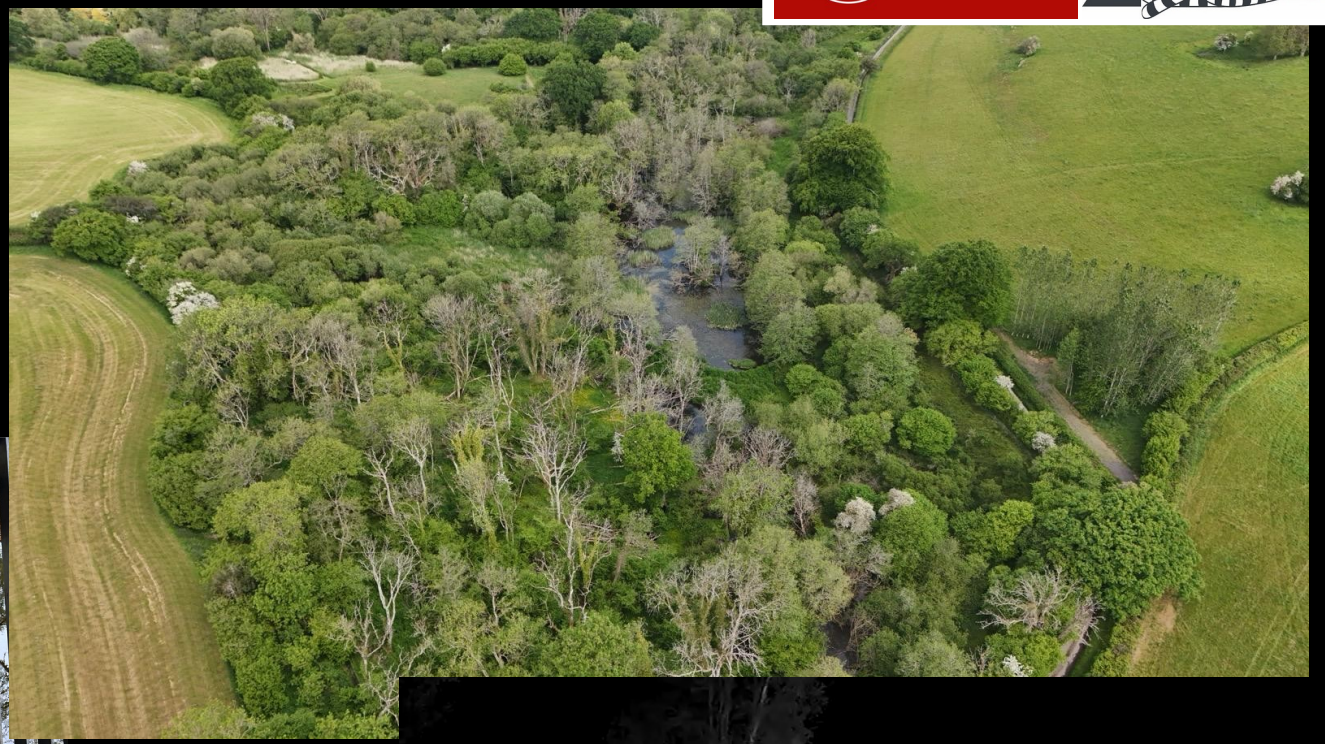
Scottish Animal Welfare Commission

October 2025

Scottish Government
Riaghaltas na h-Alba

RELEASE OPTIONS

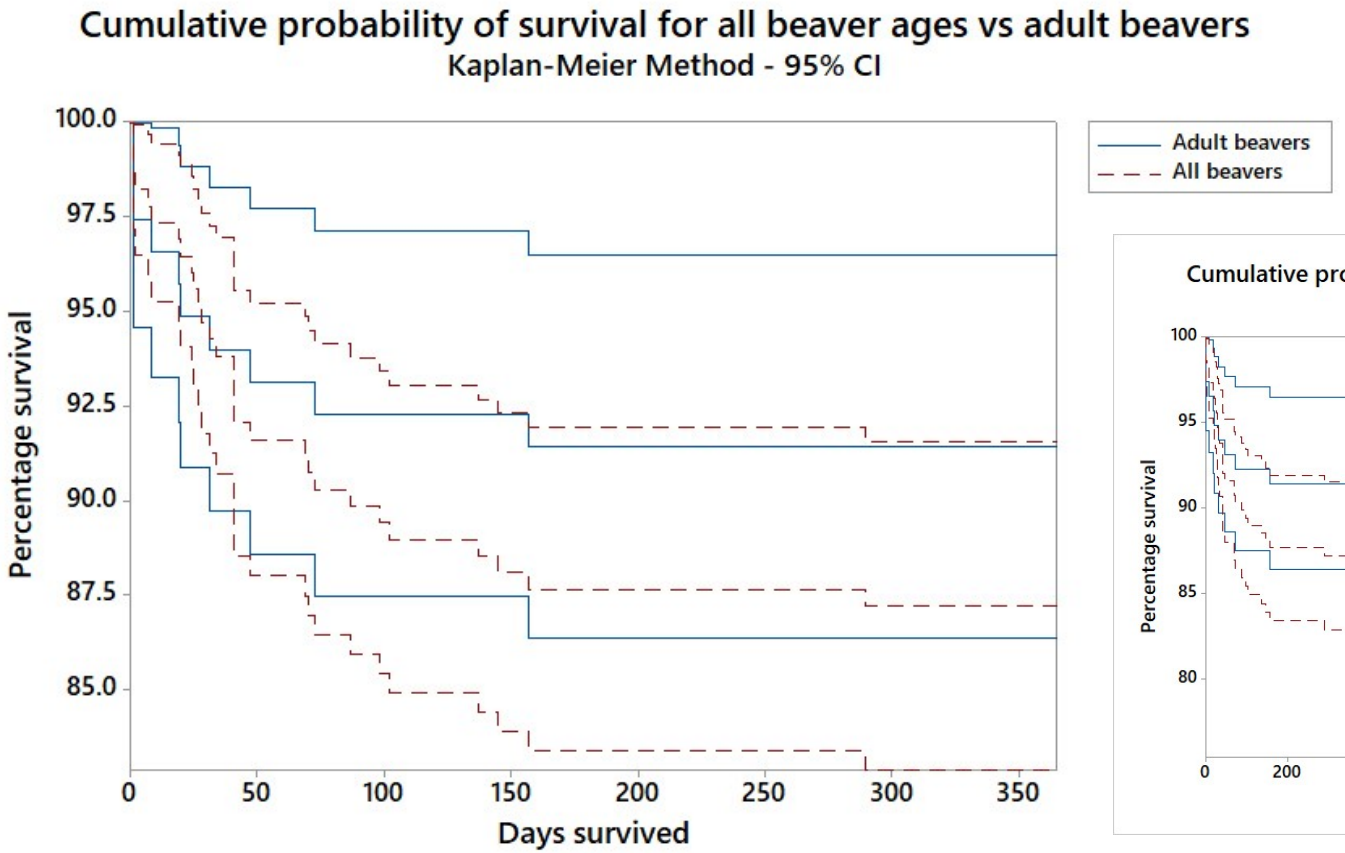


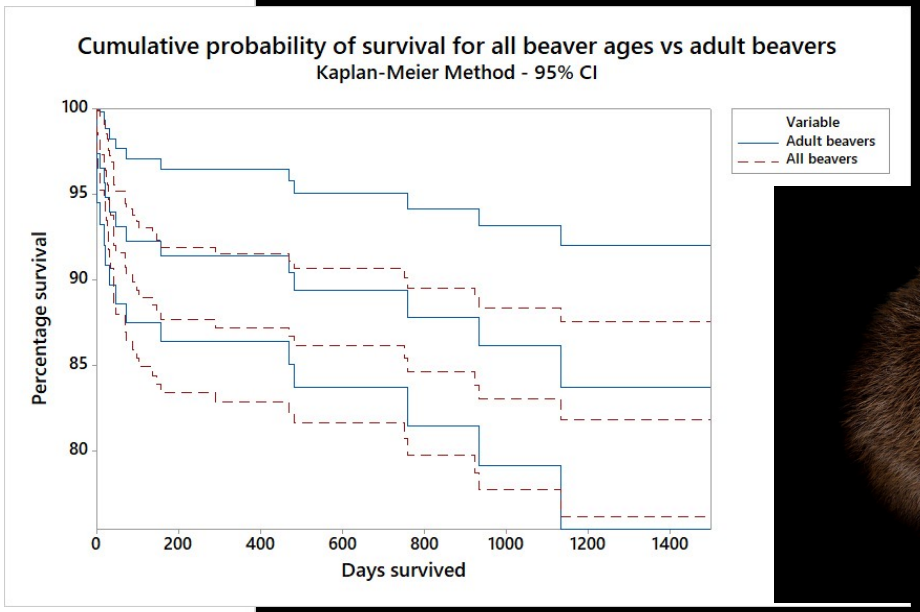






POST RELEASE SURVIVAL







Kaplan-Meier Cumulative Probability of survival:

90.4% probability of survival to 1 year post-translocation for adult beavers (95%CI 86.3-96.5%, n=117)

86.7% probability of survival to 1 year for **all** beaver age classes translocated (95%CI of 82.7-91.5%, log-rank χ^2=0.52, p=0.47, n=227).

81.84% probability of survival to 4 years for **all** beaver age classes translocated (95%CI 76.12 to 87.56%).

How this compares...

2020 -12.1% of Scottish population was shot (115/954)

Past first-year mortality rates in translocated beavers:

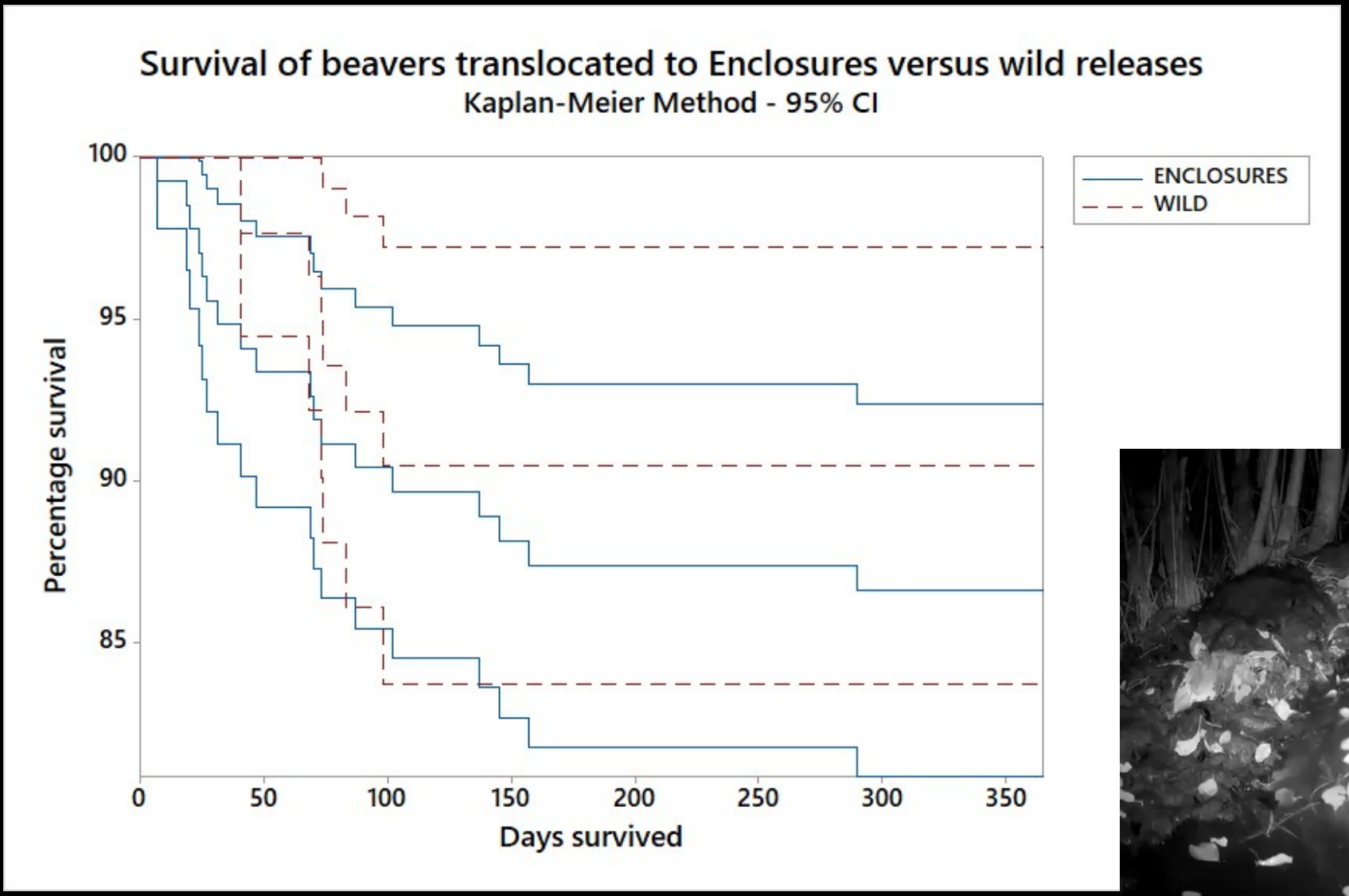
- 14% in Poland (Zurowski and Kasperczyk 1988)
- 17% in Germany (Heidecke 1986)
- 36% in the Netherlands (Nolet *et al.* 1997)
- 31% for the Scottish Beaver Trial (over 5 years), but only n=16
- 24% for the Scottish Beaver reinforcement (three years) n=21

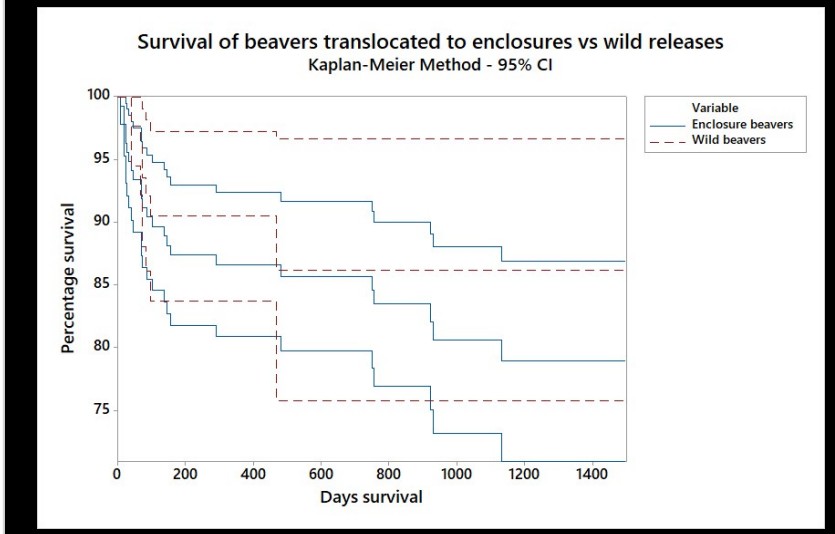


Table 2: Comparison of fatalities of animals released during the Scottish Beaver Trial and the reinforcement. As monitoring was much more intensive during the Trial, the numbers are indicative rather than directly comparable. During the Trial, kit fatalities were also recorded, but are excluded here as not released animals. One of these deaths occurred after the Trial had finished.

Release Project	Last known age class	Total released	Confirmed deceased	% confirmed fatalities
Scottish Beaver Trial 2009–2014	All animals	16	5	31%
	Adult/ sub-adult	16	5	31%
	Kits	0	0	0%
Scottish Beavers Reinforcement 2017–2020	All animals	21	5	24%
	Adult/ sub-adult	17	2	12%
	Kits	4	3	75%

ENCLOSED V'S WILD RELEASES







CONCLUSIONS













Beaver Veterinary & Captive Care book

Due out August 2026

Enter your email using the QR code to be notified when out



Sincerest gratitude to all the many individual collaborators and organisations involved in conflict mitigation, trapping, translocation, animal welfare, and health screening and the discussions around these over the years

Thank You



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Five Sisters Zoo

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NatureScot
Scotland's Nature Agency
Buidheann Nàdair na h-Alba

NATURAL ENGLAND