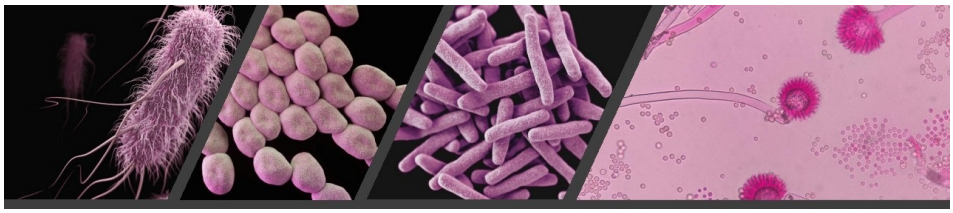

Contribution ID: **78** Type: **Oral presentation**

Abortion caused by Coxiella burnetii in captive Finnish Forrest reindeer in a zoo in the Netherlands

Friday 12 September 2025 12:30 (15 minutes)

Coxiella burnetii (Cb) is a Gram-negative intracellular bacterium causing coxiellosis in animals and Q fever in humans. Cb causes reproductive disorders in ruminants. Abortions are observed mainly in goats, sheep and less in cattle. The largest Q-fever outbreak was reported in 2007-2010 in the Netherlands caused by Cb shedding dairy goats. Since, there is a mandatory vaccination and monitoring program in the Netherlands for dairy goat and sheep.
In a zoo in the Netherlands, four Finnish forest reindeer (Rangifer tarandus fennicus) in a herd of 13, of which six were pregnant, suffered from abortions in April and May 2025. Diagnostic sampling showed positive antigen detection with qPCR from vaginal swabs and positive serology (ELISA) in all cases of abortion (4/4) and in one animal after normal parturition. Placental tissue (n=2) and fetal liver tissue (n=1) retrieved after two abortions indicated positive for Cb infection by qPCR. Necropsy of one female showed positive Cb qPCR results for spleen, liver and vaginal swab.
Direct sequencing from placental tissue resulted in a full genome and plasmid sequence. Initial strain typing with in silico Multi Locus Variable Analysis (MLVA) resulted in a Cb strain predominantly associated with cattle.
This is the first case of coxiellosis reported in Finnish forest reindeer. Due to the public function of the zoo, immediate preventive measures were taken for animal care takers and visitors according to the Dutch One Health approach.

Keywords

Q fever, coxiellosis, intra-cellular bacterium, reindeer, zoonosis

Registration ID

ECVM25-48

Professional Status of the submitter, who is also the speaker

PhD Student

Author: KANNEKENS-JAGER, Marleen (WBVR)

Co-authors: Dr KOETS, Ad (WBVR); Mrs DINKLA, Annemieke (WBVR); Mrs KAANDORP, Christine (Zoo veterinarian); HARDERS, Frank (WBVR); Dr VAN DER BRAND, Judith (Utrecht University); JACOBS, Pieter (NVWA); Dr VAN DEN BROM, René (Royal GD)

Presenter: KANNEKENS-JAGER, Marleen (WBVR)

Session Classification: AMR - Epidemiology & Surveillance: ”ESGVM Session”

Track Classification: Veterinary Bacteriology, Mycology and Virology