Cryptosporidium spp. in deer faecal samples
Bradgate Park, UK

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INTRODUCTION

Deer may act as reservoirs of various parasites that can infect humans and livestock, which can be a concern for public health and the economy. Bradgate Park, a public park in Leicestershire (UK), houses numerous herds of red and fallow deer and is highly frequented by the public due to its proximity to Leicester city.

RESULTS & DISCUSSION

Cryptosporidium sp. (Fig. 4) was detected in three deer faecal samples (positive samples were identified in those samples in which three or more oocysts were identified). Bradgate Park’s topsoils were characterised as silty loam, with a low sand content (23% sand, 23% clay, 54% silt), which in turn would facilitate retention of water and integrity of oocysts for longer periods of time, although more studies are needed.

CONCLUSION

Despite exact identification of Cryptosporidium needed at species level to detect human-pathogenic species, a parasitic load (13%) was detected in the monitored samples, which might suggest a potential role of deer in the environmental presence and distribution of these parasites which is needed to be carefully study. Thus, monitoring the health of over the 400 red and fallow deer that live in Bradgate Park will be necessary to control the potential risk of infections to humans, livestock/other wild animals and dogs. This monitoring should be done long-term and environmental influential factors should be taken into consideration.

REFERENCES


ACKNOWLEDGMENTS: Bradgate Park Trust

OBJECTIVES

We have performed a pilot project to explore the presence and circulation of Cryptosporidium spp. in avian faecal samples collected from an urban area highly frequented in Leicester city centre (UK).

MATERIALS & METHODS

Twenty-three fresh deer faecal samples were collected from Bradgate park (Fig. 1), Leicester, UK, in February 2019 and analysed using Kinyoun’s acid-fast staining technique and further assessed by using light microscope (Fig. 2). Observation of a minimum of three oocysts per sample was used as a diagnostic tool to confirm positive samples.

Figure 1: Bradgate park, Leicester, UK

Figure 2: A: Kinyoun staining procedure. B: Kinyoun stained smear on glass slide. C: Microscope

Figure 3: Species of Deer present in Bradgate park, Leicester, UK

Figure 4: Cryptosporidium spp., 4 – 6 µm, with variable morphology—round, collapsed, or distorted on one side and variable staining were evaluated and as seen using light microscopy (x 100 magnification).