

# RETROSPECTIVE STUDY OF CAPTIVE AVIAN NECROPSY

## CASES FROM A ZOO

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### OBJECTIVES

- Analyze the post-mortem reports of birds that died in the Barcelona Zoo between January 2011 to June 2023 so to make a list of the most frequent causes of mortality of these animals.
- Understand what pathologies affect these animals both individually and as a whole.

### RESULTS

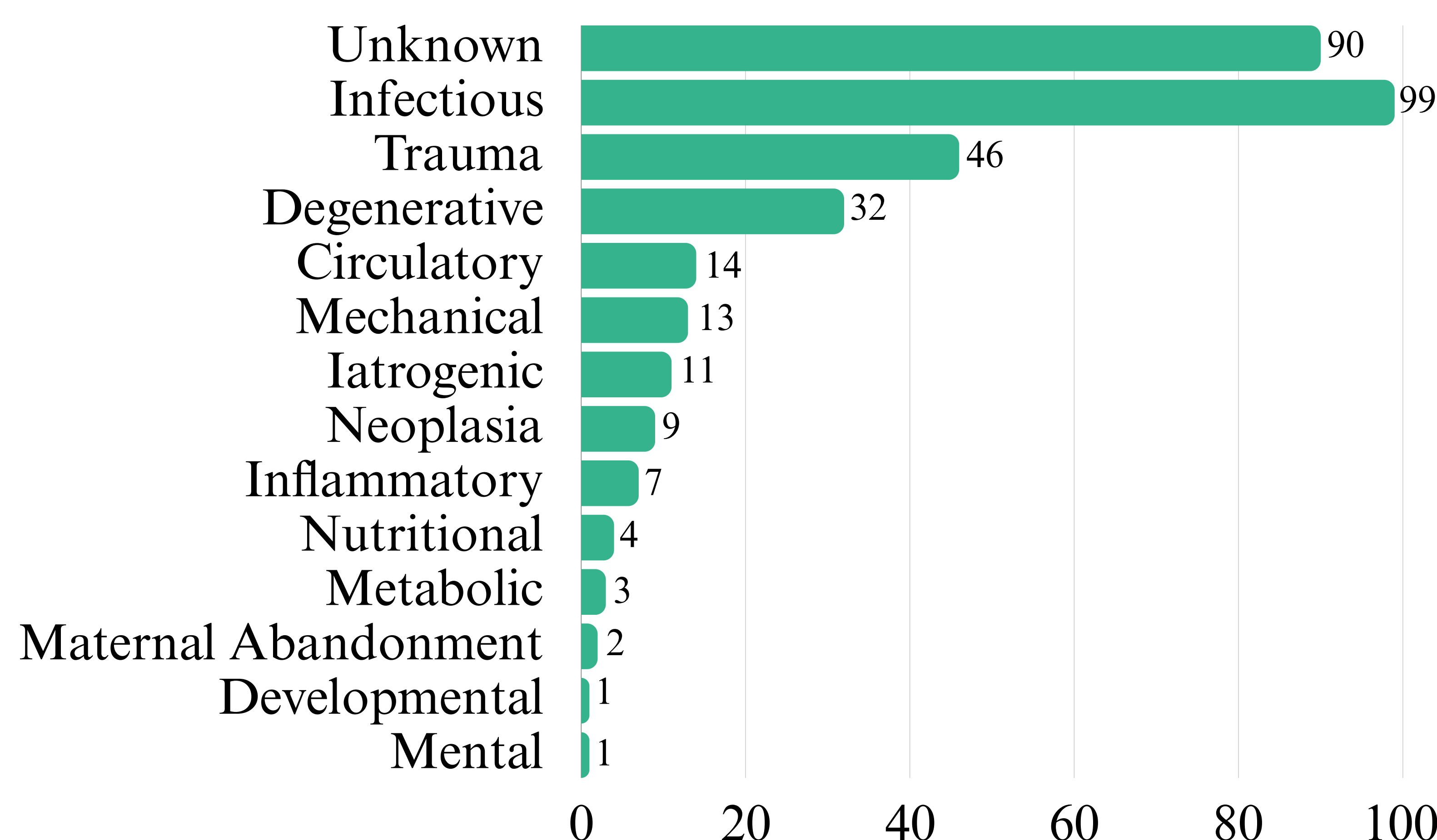


Figure 1. Causes of death of the 332 birds.

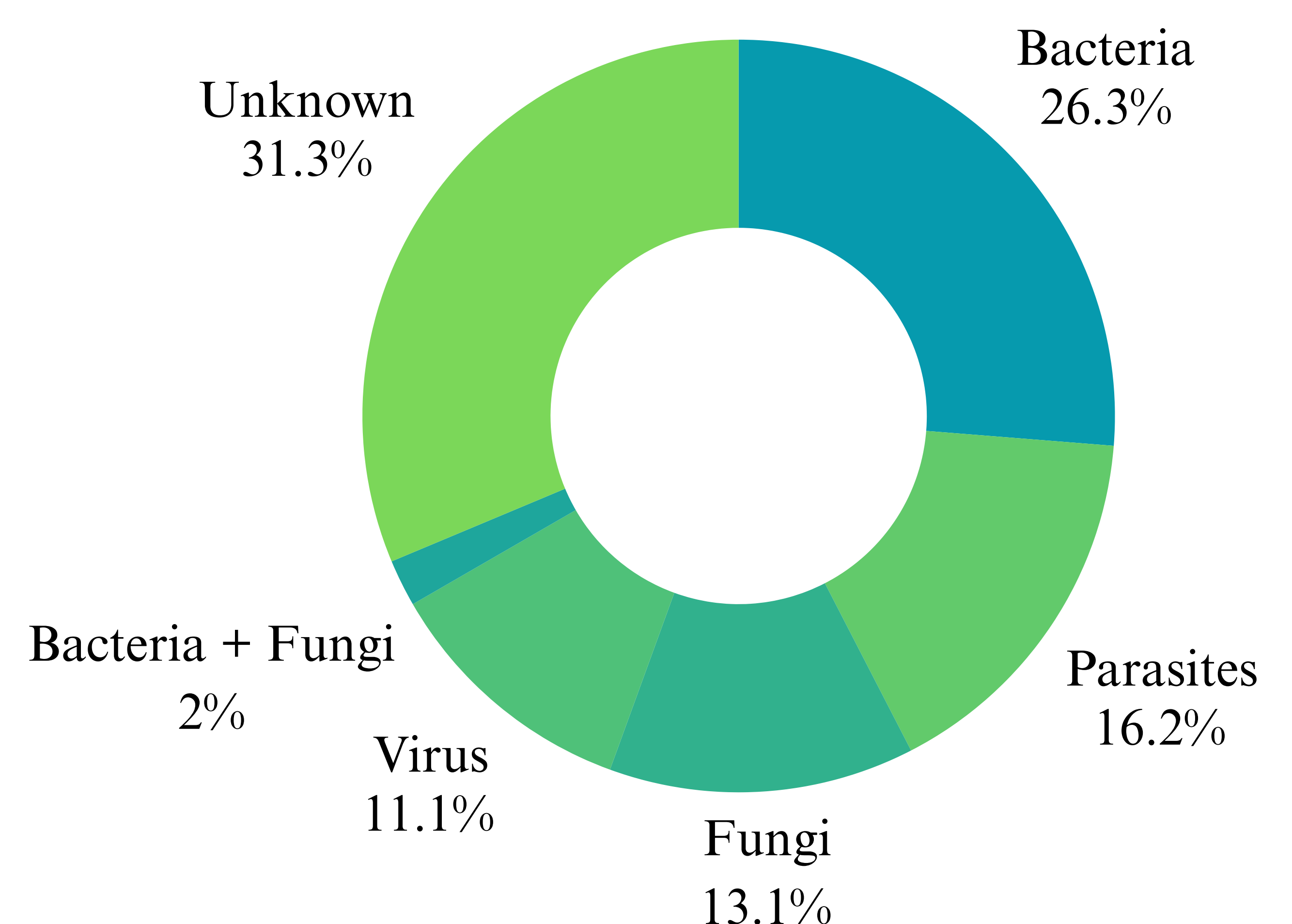


Figure 2. Aetiologies of deaths caused by infections.

### DISCUSSION

- Infections, degenerative conditions, traumas, toxicoses, and nutritional problems are the most common pathologies in zoo animals (Hosey et al. 2009). This study found a low prevalence of nutrition-related deaths and zero cases of toxicoses. Nevertheless, the three most frequent causes of death were infectious diseases, traumas and degenerative conditions.
- The high prevalence of **infection** cases is likely attributed to the limited amount of drugs and vaccines developed for zoo animals and due to the multiple transmission routes.
- Most **trauma** cases did not have any concomitant lesion that could have predisposed the animal to injury.
- The most frequent lesions related to **degeneration** were gout and amyloidosis.
- Low prevalence of **neoplasia** was observed. Lymphosarcoma is usually described as the most common neoplasia in zoo birds, but it was not observed in this study.
- **Undiagnosed cases**: decrease in unknown cause of death from 2014 on, since improvement in standardization of sample collection and shipment, and the increase of microbiological testing.
- **Notifiable diseases**: 1 chlamydiosis, 1 avian influenza, 1 avian pox, and 5 avian tuberculosis.

### CONCLUSIONS

- Health problems in zoo birds are not always apparent.
- The data collected in this type of retrospective analyses may help present and future zoo veterinarians to improve the healthcare and prevention of illnesses and diseases of captive avian species.

### BIBLIOGRAPHY

Hosey GR, Melfi V, Pankhurst S. Chapter 11: Health. In: Zoo animals: behaviour, management and welfare. 2009. Oxford: Oxford University Press. 168-218.