

SARAH JOHANSON, Department of Natural Science and Mathematics, West Liberty University, WV 26074, KINSEY GUTHRIE, Department of Natural Science and Mathematics, West Liberty University, WV 26074 and ZACHARY LOUGHMAN, Department of Natural Science and Mathematics, West Liberty University, WV 26074. Containment of a *Cryptosporidium serpentis* outbreak in a snake collection – A case study

*Cryptosporidium* is a parasitic apicomplexid that causes respiratory and gastrointestinal illnesses across many vertebrate species. Infections in mammals and birds rarely prove fatal in healthy adult animals. However, in reptiles, the infection will most likely become lethal. Specific to snakes, *Cryptosporidium serpentis* infects the gastrointestinal tract and causes hypertrophy of the mucosa of the stomach resulting in the inability to pass food down the gastrointestinal tract. Disease pathology is known, but a proven cure for this disease in snakes still remains unknown. When infections arise, most zoological institutions rely heavily on quarantining and euthanasia to deal with this highly contagious and lethal disease. On December 1, 2018, a case of the disease was confirmed within the West Liberty University Zoo Science Snake Collection. To maintain the health and safety of the collection and prevent further spread of disease, major steps were taken through sanitation practices and fecal testing to track disease outbreak back to a case 0. Herein, we report individual snakes that had *Cryptosporidium* spores present but were ultimately able to pass the infection and return to a disease-free state. Therefore, evidence exists within this collection that a particular clade of snakes may prove to be more disease resistant than others. We also report an active strategy to isolate diseased individuals and contain a *Cryptosporidium* infection outbreak in a large snake collection.