

Attachment 3. Pathogen antibody seroprevalence detected from 27 captured North Cumberland Wildlife Management area elk (2019-2020). Elk01 and Elk24 did not have sufficient blood samples collected for testing. Elk were tested for exposure to bluetongue virus (*Orbivirus* spp.), *Brucella abortus* (brucellosis), *Pestivirus* spp. (bovine viral diarrhoea, BVD), epizootic hemorrhagic disease virus (EHD, *Orbivirus* spp.), *Varicellovirus* sp. (infectious bovine rhinotracheitis, IBR), *Respirovirus* sp. (bovine parainfluenza virus-3, PI-3), *Mycobacterium avium* subspecies *paratuberculosis* (MAP, Johne's Disease), *Leptospira interrogans* (leptospirosis), and *Vesiculovirus* spp. (vesicular stomatitis Indiana and New Jersey strains). Diagnostic tests used are denoted by superscript.

Elk ID	Bluetongue virus ¹	<i>Brucella abortus</i> ²	<i>Pestivirus</i> spp. ³	EHD virus ⁴	<i>Varicellovirus</i> sp. ³	MAP		<i>Leptospira interrogans</i> ⁵	<i>Vesiculovirus</i> spp. ³	<i>Respirovirus</i> sp. ³	<i>Toxoplasma gondii</i> ⁵
						Zoetis/Hatate ^{1,*}					
2	-	-	-	+	-	-/-	+	-	-	+	
3	-	-	-	-	-	-/-	+	-	-	+	
4	-	-	-	-	-	-/-	+	-	-	-	
5	-	-	-	+	-	-/-	+	-	-	-	
6	-	-	-	+	-	-/-	+	-	-	-	
7	-	-	-	-	-	+/+	+	-	-	-	
8	-	-	-	-	-	-/-	+	-	-	-	
9	-	-	-	+	-	-/-	-	-	-	-	
10	-	-	-	+	-	-/-	-	-	-	+	
11	-	-	-	-	-	+/+	+	-	-	+	
12	-	-	-	+	-	-/-	+	-	-	+	
13	-	-	-	-	-	-/-	+	-	-	-	
14	-	-	-	-	-	-/-	+	-	-	-	
15	-	-	-	+	-	-/-	+	-	-	+	
16	-	-	-	-	-	-/-	+	-	-	+	
17	-	-	-	+	-	-/+	+	-	-	-	
18	-	-	-	+	-	-/-	-	-	-	+	
19	-	-	-	-	-	-/-	+	-	-	+	
20	-	-	-	+	-	-/+	+	-	-	+	
21	-	-	-	+	-	+/-	+	-	-	+	
22	-	-	-	-	-	+/-	-	-	-	+	
23	-	-	-	+	-	-/+	-	-	-	-	
25	-	-	-	-	-	-	-	-	-	-	
26	-	-	-	-	-	-	+	-	-	+	
27	-	-	-	+	-	-/-	-	-	-	+	
28	-	-	-	-	-	-/-	-	-	-	-	
29	-	-	-	+	-	-/+	+	-	-	+	

+ Antibodies detected

-No antibodies detected

¹ Enzyme-linked immunoassay (ELISA)

² Buffered acidified plate antigen

³ Serum neutralization

⁴ Agar gel immunodiffusion

⁵ Modified agglutination test

*MAP was tested using the Zoetis Johne's ELISA kit (Zoetis) and an electrochemical detection ELISA (Hatate, Hatate et al. 2021)