United States Department of the Interior

NATIONAL PARK SERVICE
PO Box 168
Yellowstone National Park
Wyoming 82190

IN REPLY REFER TO:

N1615(YELL)

September 26, 2011

Mr. Will Graves
900 Hillen Drive
Millersville, Maryland 21108

Dear Mr. Graves:

We received your letter of inquiry regarding the potential role of wolves in the transmission of *Neospora caninium* to Yellowstone's wild ungulates. Thank you for your interest in the park's resources.

As you point out, the recent report by Dr. Dubey, reporting that wolves can serve as definitive hosts of *N. caninium* is consistent with some of the serological work we have conducted in Yellowstone National Park. Wolves within Yellowstone do come into contact with *N. caninium* and likely play a role in the transmission cycle. No one has specifically addressed your question about whether oocysts shed by wolves infect wild elk, moose, or deer, but since transmission cycles have been described between coyotes and white-tailed deer, we have no reason to doubt that such a cycle exists between wolves and the park's wild ungulates.

Wolves likely contracted the infection after they were reintroduced to Yellowstone from an already established transmission cycle between coyotes, possibly foxes, and domestic dogs (outside of the park) and the region's wild and domestic ungulates. In other words, transmission of *N. caninium* between local canids and wild ungulates was probably already commonplace prior to wolves entering the ecosystem. We have no reason to believe that the addition of wolves into this established transmission cycle has made a difference in overall disease dynamics. In fact, since wolves have caused a substantial decline in the region's coyote population, it is possible that they have actually reduced the rate of transmission of *N. caninium* to the park's wild ungulates.

We hope this helps answer a few of your questions. Yellowstone is a dynamic place and late summer is a difficult time to see elk, as the herds tend to migrate towards higher elevations to follow the most nutritious resources and to escape heat and insects. At the present, however, we have no reason to believe that *N. caninium* is causing declines in the elk population.

Sincerely,

David E. Hallac
Chief, Yellowstone Center for Resources