

1. USGS is supporting the US Government [emergency response](#) to COVID-19 with a focus on possible dynamics of the disease in Federal trust species (migratory birds, threatened and endangered species, interjurisdictional fish, and other species of concern). This contributes to a [multi-sectoral One Health approach](#) to COVID-19 and is in coordination with HHS/CDC and USDA.
2. At this time, there is no evidence that animals play a significant role in spreading SARS-CoV-2, the virus that causes COVID-19. It appears that [the virus can spread from people to animals in some situations](#). Because SARS-CoV-2 is [genetically similar to a bat coronavirus](#), USGS's initial effort has focused on the possibility that North American bats, if exposed, could become infected and suffer mortality or the virus could become established in bat populations, potentially affecting the persistence of this disease in the US. This aligns with USGS efforts to conduct research and surveillance to support the Federal response to [white-nose syndrome](#), which has killed over six million insectivorous bats.
3. USGS in collaboration with USFWS conducted a rapid assessment of the risk for transmission of SARS-CoV-2 from humans to bats: <https://pubs.er.usgs.gov/publication/ofr20201060>. The collaborative effort included USGS Patuxent Wildlife Research Center, USGS National Wildlife Health Center (NWHC), USGS Fort Collins Science Center, USFWS, and EcoHealth Alliance. Utilizing expert elicitation and mathematical modeling, this decision analysis study found that use of additional personal protective equipment (i.e., N95 respirator) would significantly reduce the risk of bats being exposed to SARS-CoV-2 from humans working with them in close proximity (research scientists, wildlife rehabilitators, and wildlife control operators).
4. To address the uncertainty regarding SARS-CoV-2 infections in native bats, USGS NWHC is conducting research in its biosafety level 3 laboratories with all the appropriate administrative and engineering controls in place to ensure the work is conducted safely. NWHC is the only federal high-containment laboratory dedicated to wildlife disease research. USGS National Wildlife Health Center (NWHC) just completed an experimental challenge study in which big brown bats were experimentally exposed to SARS-CoV-2 to determine if they could become infected and shed the virus. Data analysis is underway and the manuscript will be submitted for publication in a peer-reviewed journal. In addition, NWHC is working with federal and academic partners to develop *in vitro* cell cultures of various tissues from little and big brown bats. These tissues will be exposed to the virus in a petri dish to see if it replicates in the cells. This will provide evidence whether or not these species will be susceptible to infection. Finally, NWHC is opportunistically testing for coronaviruses (incl. SARS-CoV-2) in bats and other wild animals submitted there for cause-of-death investigations. So far, SARS-CoV-2 virus has not been detected. There is no evidence currently that North American wildlife are a source of SARS-CoV-2 for people.

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