

# Memorandum

Date: April 22, 2020

To: Regional Managers and Wildlife Environmental Program Managers,  
Department of Fish and Wildlife  
Northern Region  
North Central Region  
Bay Delta Region  
Central Region  
South Coast Region  
Inland Desert Region

Assistant Chiefs,  
Department of Fish and Wildlife  
Northern Enforcement District  
Northern Central Enforcement District  
Central Enforcement District  
Southern Enforcement District  
OSPR Enforcement District

From: Stella McMillin, Environmental Program Manger  
Department of Fish and Wildlife  
Wildlife Investigations Lab

Subject: **Guidance for CDFW staff required to handle bats and/or carnivores during the COVID-19 pandemic**

Issue Date: April 22, 2020 (in effect immediately and until further notice)

The emergence of COVID-19, the disease caused by the SARS-CoV-2 virus, is a human health crisis of unusual proportions with the potential to directly impact California's wildlife. Experts agree that this novel coronavirus likely originated in bats and preliminary research into this virus raises concern that other mammals could be susceptible. However, additional work is needed and the potential risks SARS-CoV-2 may pose to wildlife remains largely unknown. A multi-agency, State and Federal task force has recently convened to assess these risks. Until more is known, the Department is taking a precautionary approach to working with and handling native wildlife that could be at risk of human-to-animal viral transmission (termed reverse zoonosis).

**The following precautionary guidance should be implemented immediately until further notice:**

- 1) Department staff should adhere to state, county, and local [stay home orders](#) to the maximum extent possible consistent with guidance from the Directors Office and CDFW's COVID-19 taskforce.

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- 2) For all work, employ the same precautions recommended to reduce person-to-person transmission to reduce the risk of human-to-animal transmission. Stay 6 feet apart from co-workers (or susceptible animals), wash hands, avoid touching your face, cover your nose and mouth.
- 3) Fieldwork that involves the direct handling of bats and carnivores should be done consistent with CDFW's: 1) *Guidelines for Assessing Critical Department Functions*; 2) *Critical Field Work Best Practices*; and 3) *Approved Critical Field Work List*, all dated 4-14-2020 or subsequent approved versions thereafter.
- 4) Where handling of bats (Order Chiroptera) or carnivores (Order Carnivora) cannot be avoided, CDFW staff should:
  - a. Wear gloves and an appropriate face covering (woven cotton or surgical mask, plastic face shield, cotton bandana or neck gaiter). N95 masks should be reserved for healthcare providers and first responders.
  - b. Thoroughly clean any reusable supplies that contact animals with soap and water followed by disinfection whenever possible with 70% isopropyl alcohol, 10% solution of chlorine bleach or Lysol.
- 5) Consistent with public health guidance, CDFW staff that have been in contact with a COVID-19 positive person within the past 14 days are not permitted to handle wildlife. Staff exhibiting symptoms of COVID-19 (fever, cough, shortness of breath) should stay home and seek medical advice.

This guidance will be updated as more information and research findings are released. If you have additional questions about COVID-19 and wildlife, please contact either Dr. Deana Clifford (deana.clifford@wildlife.ca.gov) or Dr. Brandon Munk (brandon.munk@wildlife.ca.gov).

Please take the time you need to care for yourself and your loved ones and support one another during this difficult period. While this time is full of uncertainty, we know that your commitment to wildlife remains unwavering and for that we are grateful.

#### Additional Information Regarding Human-to-Animal Transmission of SARS-CoV-2 as of April 8, 2020:

- A very small number of detections of human-to-animal transmission of SARS-CoV-2 have occurred. The disease remains a human pandemic with human-to-human transmission being the source of infections in people.
- The U. S. Centers for Disease Control and Prevention (CDC) is aware of a single case of suspected transmission of SARS-CoV-2 (the virus that causes the disease in people known as COVID-19) from people to animals in the United States. A tiger at the Bronx Zoo in New York tested positive for the virus after it and a few other large cats at the zoo began showing clinical signs.
- Other reported instances of suspected SARS-CoV-2 transmission from people to animals include two domestic cats (Belgium, Hong Kong) and two dogs (Hong Kong); however, only the cat from Belgium showed any clinical signs of infection.
- A recent study from China showed that domestic cats and ferrets are susceptible to experimentally induced infection of SARS-CoV-2 and that one infected cat transmitted

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the virus via aerosol droplets to another cat. In this study, dogs were minimally susceptible, and pigs, chickens, and ducks were not susceptible.

- An unpublished report from Germany corroborated the ferret, pig, and chicken findings of the study from China. Additionally, the German work showed that a species of fruit bat, *Rousettus aegyptiacus*, was susceptible to transient infection and was able to replicate the virus.
- More studies are needed to validate these preliminary findings and assess potential risks to wildlife.

#### Additional Information Regarding Coronaviruses and Wildlife:

- Coronaviruses as a clade are one of the more important groups of viruses in veterinary medicine and animal health. There are 4 groups of coronaviruses, alpha-, beta-, gamma-, and deltacoronaviruses.
- Alphacoronaviruses are found primarily in mammals. These viruses have been regularly detected in North American bat species, as well as canines, and humans (some human cold viruses are in this group).
- SARS-CoV-2 is a betacoronavirus most closely related to a virus sequenced from a horseshoe bat in China's Yunnan province in 2013. The virus that caused the severe acute respiratory syndrome (SARS) outbreak in 2003, SARS-CoV-1, is also a beta coronavirus and the most closely related virus that affects humans.
- We do not know what, if any, risk SARS-CoV-2 is to North American bats, or if SARS-CoV-2 infection could increase mortality in bats affected by WNS.
- Gammacoronaviruses and Deltacoronaviruses are carried primarily by avian hosts and are not known to pose a disease risk to people.

#### Additional Resources:

USGS National Wildlife Health Center [Wildlife Health Bulletin \(2020-003\)](#), with information on coronaviruses in wildlife

Centers for Disease Control [information on COVID19 associated risks for animals](#)

American Veterinary Medical Association [COVID19 website](#)

cc: Stafford Lehr, Deputy Director  
Wildlife and Fisheries Division

Kevin Shaffer, Acting Chief  
Wildlife Branch

David Bess, Deputy Director  
Law Enforcement Division

Drs. Deana Clifford and Brandon Munk,  
Wildlife Investigations Laboratory