



### COVID-19 with Reptiles and Amphibians

There has been a great deal of change in the past several weeks, along with a great deal of new information. It can be confusing and scary. The hope of this article is to help spread concise, evidence-based information to help with regards to reptiles and amphibians in human care.

#### What is COVID-19?

Coronaviruses are a large group of RNA viruses that can be found in many species, especially mammals and birds and are often associated with mild respiratory and enteric signs. There are several zoonotic coronaviruses that can cause serious disease in humans. Examples are MERS-CoV that can be found in dromedary camels and humans, and SARS-CoV which is believed to have originated in bats and civets. COVID-19 is caused by a coronavirus, SARS-CoV-2 that infects humans and may have originated in bats and/or pangolins.

#### How is it spread?

According to the CDC, SARS-CoV-2 is primarily spread through close contact with affected individuals or through respiratory droplets after an infected individual coughs or sneezes. The virus can survive for relative long periods of time on surfaces. A recent study by researchers from NIH, CDC, UCLA, and Princeton found that it “was detectable in aerosols for up to three hours, up to four hours on copper, up to 24 hours on cardboard and up to two to three days on plastic and stainless steel.”

#### How do I protect myself and the animals in my care?

1. Clean your hands: the CDC recommends a 20 second hand washing using standard soap and water or a hand sanitizer that is at least 60% alcohol.
2. Social distancing: Close contact is still the main way this disease is spread. Avoid being closer than 6 feet to others, stay home if you are sick, work from home if possible.
3. Disinfect surfaces: The ECDC recommends cleaning with water and detergent and common disinfectants. The CDC recommends a bleach solution (4 teaspoons per quart of water, or 1/3 cup per gallon- 25 mL per liter of water in metric). You can also use a 70% alcohol solution.

#### SARS-CoV-2 and reptiles/amphibians

There is no evidence of transmission of SARS-CoV-2 between animals and humans. There is also no evidence that SARS-CoV-2 causes illness in any animals aside from humans. There have been two reports of dogs from infected owners that have tested weak positive for the SARS-CoV-2, but dogs are not believed to play a role in transmission.

There was an early suggestion that the virus originated in a snake (many-banded krait (*Bungarus multicinctus*) or Chinese cobra (*Naja atra*)), but that has since been deemed very unlikely. Some data indicate that SARS-CoV-2 may be able to infect animals other than humans, but so far animals are not playing a role in the COVID-19 outbreak.

It is not considered likely that SARS-CoV-2 will be found in reptiles or amphibians, either as a cause of disease in these animals or that these animals can function as a reservoir that allows spread to humans.

## Caring for captive reptiles and amphibians

Currently, the American veterinary Medical Association (AVMA) emphasizes that there is no evidence that pets become infected with SARS-CoV-2, or that they spread it to humans. Their current recommendations are to practice normal handwashing before and after interacting with pets if you are not sick. If you are ill or know that you are infected with SARS-CoV-2, then the AVMA recommends you do not have contact with your pets and arrange for someone else to care for them out of an abundance of caution.

If you are disinfecting the cages for your reptiles and amphibians, we recommend that you keep in mind most of the enclosures have limited ventilation. When using bleach, alcohol, quaternary ammonia compounds or other cleaning agents, keep in mind that the cage may need an extended time to ventilate before the animal can be returned to the cage. Fumes from disinfectants can be very serious respiratory irritants.

With amphibians, keep in mind that most have very permeable skin that leaves them more sensitive to toxicity or irritation from anything that touches them. Be sure that soaps or disinfectants on your hands are thoroughly rinsed before handling an amphibian, or better yet, use gloves to protect their skin. Make sure that any cage disinfectant is thoroughly rinsed off before replacing an animal in a cage or adding new water or substrate to the enclosure.

Feeding tongs, bowls and other smooth surfaces can be disinfected with standard disinfectants, but they should be thoroughly rinsed after disinfection. When possible, the best policy is still not to share between animals.

If any new animals are introduced to your collection, they should be quarantined for a sufficient length of time: minimum of 60 days in most cases, in a separate room, and standard clinical and laboratory health screening should be carried out. Do not share feeding tongs, bowls, or other supplies. Always deal with your normal collection first, then quarantined or sick animals. Clean thoroughly in between each group. By the way, this is recommended all the time, not just during this pandemic. Outbreaks of respiratory diseases and other conditions can devastate a full collection quickly. Proper quarantine can prevent introduction of a serious disease from a new animal entering your collection.

Finally, stock a 2-week supply of food and medication for your reptiles and amphibians. There very well could be further limitations placed on movement. Stores and clinics may be overwhelmed or may be forced to close at some point. It's best to be prepared for at least a short period of difficulty in getting access to pet foods, vegetables, frozen prey items, insects and any prescription medication that your pet may require.

### If you have concerns

If you are concerned about a reptile or amphibian in your care, the best source of up-to-date information is a veterinarian with some expertise in treating them. You can find a veterinarian in your area through the find-a-vet resource through the Association of Reptile and Amphibian Veterinarians: <https://arav.site-ym.com/search/custom.asp?id=3661>

### Resources

- <https://www.cdc.gov/coronavirus/2019-ncov/prepare/prevention.html>
- <https://www.avma.org/resources-tools/animal-health-and-welfare/covid-19>
- <https://www.nih.gov/news-events/news-releases/new-coronavirus-stable-hours-surfaces>
- <https://www.who.int/health-topics/coronavirus>

- <https://www.sciencenews.org/article/snakes-probably-not-source-spread-new-coronavirus-outbreak-china>
- <https://www.ecdc.europa.eu/en/publications-data/interim-guidance-environmental-cleaning-non-healthcare-facilities-exposed-2019>