

COVID-19, caused by infection with SARS-CoV-2, is a human disease which most likely emerged from an animal source and through widespread human-to-human transmission became a pandemic. As of 31 July 2022, around **584 million** confirmed human cases have been reported worldwide, with more than **6.4 million** human deaths¹. The nature of this new zoonotic virus, together with its widespread distribution and the susceptibility of some animal species to infection, manifests in animal infections arising from close contact between people and animals. Conversely, there is also evidence that, for some animal species, close contact with infected animals can represent a potential source of infection in humans². This report is a monthly update of the global situation of the report of SARS-CoV-2 in animals, with a special focus on the new reports submitted to WOA in the last month.

Global situation since the beginning of the pandemic

The worldwide geographical distribution of SARS-CoV-2 outbreaks in animals reported to WOA is shown in Figure 1. The first case of SARS-CoV-2 in animals was officially reported to WOA by Hong-Kong (SARC) on 29 February 2021 in a dog.

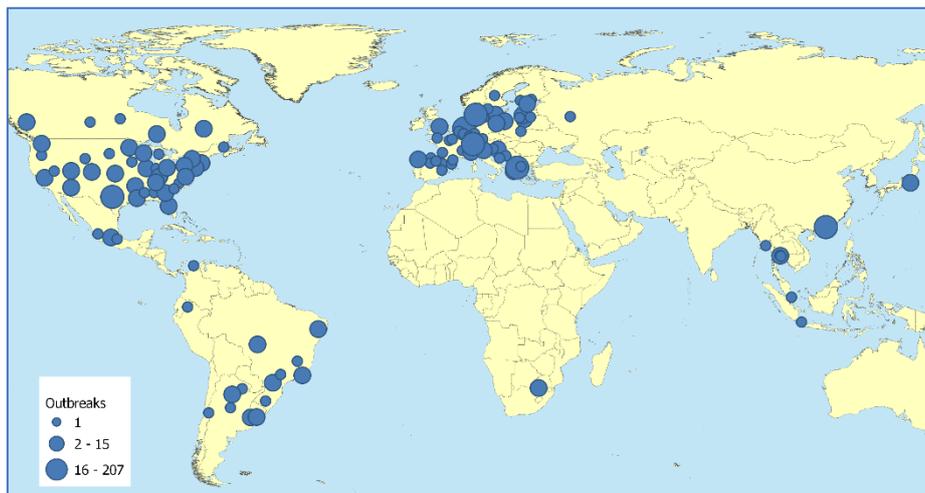


Figure 1. Worldwide distribution of SARS-CoV-2 outbreaks in twenty-three animal species reported to WOA (as of 31 July 2022). Note that dot size on the map is proportional to the number of outbreaks reported.

Table 1 shows the global distribution of animal infections with SARS-CoV-2. Thirty-five countries in the Americas, Africa, Asia, and Europe have reported the occurrence of the disease, in twenty-four different animal species (cats, dogs, mink, otter, pet ferrets, lions, tigers, pumas, snow leopards, gorillas, white-tailed deer, fishing cat, Binturong, South American coati, spotted hyena, Eurasian lynx, Canada lynx, hippopotamus, hamster, mule deer, giant anteater, West Indian manatee, black-tailed marmoset, common squirrel monkey).

¹ <https://coronavirus.jhu.edu/map.html>

² https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.23.2001005#html_fulltext

Table 1. Number of outbreaks (n=679) reported worldwide, by species and region (as of 30 July 2022).

Species	Region			
	Africa	Americas	Asia	Europe
Cat		X	X	X
Dog		X	X	X
Mink		X		X
Otter		X		
Pet ferret		X		X
Lion	X	X	X	X
Tiger		X	X	X
Puma	X	X		
Snow leopard		X		
Gorilla		X		X
White-tailed deer		X		
Fishing cat		X		
Binturong		X		
Coatimundi		X		
Spotted hyena		X		
Eurasian lynx				X
Canada lynx		X		
Hippopotamus				X
Hamster			X	
Mule deer		X		
Giant anteater		X		
West Indian manatee		X		
Black-tailed marmoset		X		
Common squirrel monkey		X		

Update during last month (01/07/2022 - 31/07/2022)

During the last month **1 outbreak** have been reported or updated by **1 country (United States of America)** in **1 animal species** (common squirrel monkey). The recent distribution of outbreaks is reported in Figure 2.



Figure 2. Worldwide recent distribution of SARS-CoV-2 outbreaks reported to WOA (01/07/2022 - 31/07/2022).

EPIDEMIOLOGICAL COMMENTS

Summary of the global situation and recommendations

While the main driver of community and international spread in the current pandemic is human to human transmission, animal cases of infection with SARS-CoV-2, though still only occasional occurrences, continue to rise. Currently, **679 outbreaks** in animals have been reported globally, affecting **24 species** in **36 countries**. Some countries have experienced a high prevalence of outbreaks in mink farms, and variant strains have now been identified in mustelids. As infection with SARS-CoV-2 is an emerging disease, WOA strongly encourages Members to report through WAHIS the occurrence of any cases in animals that comply with the case definition provided in WOA guidelines³.

Relevant changes in disease situation during the period:

- SARS-CoV-2 was reported through **1** Follow-up report by **United States of America** in common squirrel monkey
-

Relevant epidemiological comments from countries:

- **United States of America (cats and dogs):** -- Update July 8, 2022 Arizona (AZ): A squirrel monkey at a zoo was confirmed positive for SARS-CoV-2 at the National Veterinary Services Laboratories (NVSL) based upon molecular testing (PCR and sequencing). The squirrel monkey was likely exposed to a person with COVID-19. Clinical history included diarrhea, weakness and neurologic signs. Preliminary testing was conducted through an ongoing captive zoo animal surveillance effort in collaboration with the Arizona Department of Health Services and the Translational Genomics Research Institute. The monkey died on June 19 and a complete necropsy was performed at Midwestern University; additional testing is pending. It is unclear what, if any role the presence of SARS-CoV-2 played in the clinical presentation. This report represents a new species with detection of a positive SARS-CoV-2 for the U.S., but not a new state. June 2022 Virus neutralizing antibodies in the absence of other positive test results have been detected in the following animals (listed by state): 2 Lions (KS) 6 Cats (WA)** 10 Dogs (WA)** ** Samples collected as part of planned and targeted active surveillance of a specific animal, with known or suspected exposures to a person with COVID-19 or other exposure to SARS-CoV-2, to better understand risk factors for SARS-CoV-2 transmission.

³ https://www.woah.org/fileadmin/Home/MM/A_Sampling_Testing_and_Reporting_of_SARS-CoV-2_in_animals_3_July_2020.pdf

Other relevant information during the period (WOAH documents, relevant news, upcoming webinar or conferences)

- WOAAd hoc Group on COVID-19 at the Animal-Human Interface - https://former.woah.org/fileadmin/Home/MM/14th_call_AHG_COVID-19.pdf
- [Statement from the Advisory Group on SARS-CoV-2 Evolution in Animals concerning the origins of Omicron variant - WOAAd hoc Group on SARS-CoV-2 Evolution in Animals](#)
- [8th-call-advisory-group-sars-cov2-evolution-in-animals.pdf \(woah.org\)](#)
- [Experimental infection of Mexican free-tailed bats \(Tadarida brasiliensis\) with SARS-CoV-2 \(biorxiv.org\)](#)
- [Early Release - Susceptibility of Wild Canids to SARS-CoV-2 - Volume 28, Number 9—September 2022 - Emerging Infectious Diseases journal - CDC](#)
- [SARS-ANI: a global open access dataset of reported SARS-CoV-2 events in animals | Scientific Data \(nature.com\)](#)