

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 January 2022, around 390 million confirmed human cases have been reported worldwide, with more than 5.7 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 the OIE 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 the OIE is shown in Figure 1. The first case of SARS-CoV-2 in animals was officially reported to the OIE by Hong-Kong (SARC) on 29 February 2021 in a dog.

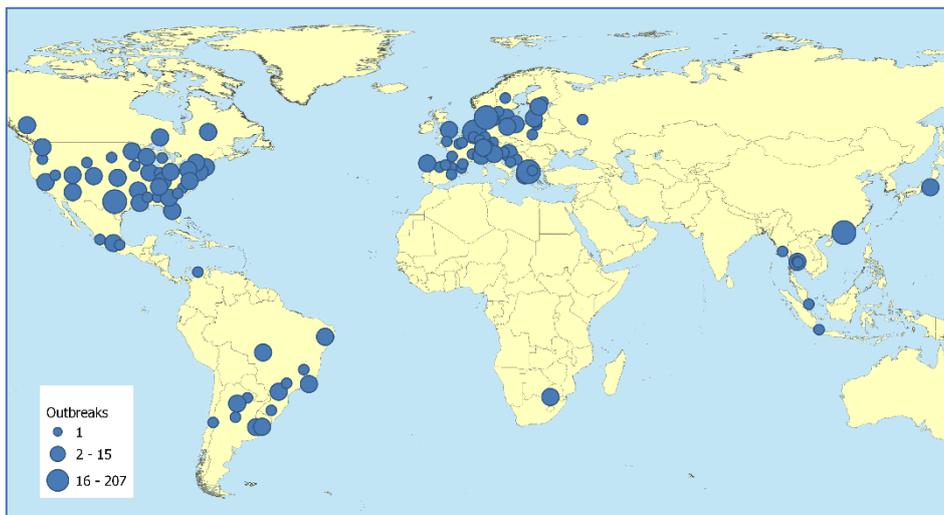


Figure 1. Worldwide distribution of SARS-CoV-2 outbreaks in fifteen animal species reported to the OIE (as of 31 January 2022). Note that dot size on the map is proportional to the number of outbreaks reported.

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 nineteen 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).

Table 1. Number of outbreaks (n=645) reported worldwide, by species and region (as of 31 January 2022).

Species																				
	Cat	Dog	Mink	Otter	Pet ferret	Lion	Tiger	Puma	Snow leopard	Gorilla	White-tailed deer	Fishing cat	Binturong	Coatimundi	Spotted hyena	Eurasian lynx	Canada lynx	Hippo	Hamster	
Region																				
Africa						Yes		Yes												
Americas	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes			
Asia	Yes	Yes				Yes	Yes													Yes
Europe	Yes	Yes	Yes		Yes	Yes	Yes									Yes		Yes		

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

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

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

During the last month **22 outbreaks** have been reported or updated by **6 countries (Argentina, Canada, Hong Kong, Slovenia, Switzerland, and United States of America)** in **7 animal species** (American mink, cat, dog, hamster, pet ferret, tiger, withe-tail deer,). The recent distribution of outbreaks is reported in Figure 2.



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

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, **645 outbreaks** in animals have been reported globally, affecting **19 species** in **35 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, the OIE strongly encourages Members to report through WAHIS the occurrence of any cases in animals that comply with the case definition provided in the OIE guidelines³.

Relevant changes in disease situation during the period:

- SARS-CoV-2 was reported through **1 Immediate notification** by **Argentina** in **cats, dogs** and a **tiger**
- SARS-CoV-2 was reported through **1 Immediate notification** and **1 Follow-up report** by **Hong Kong** in **hamsters**
- SARS-CoV-2 was reported through **1 Follow-up report** by **Canada** in **white-tailed deer**
- SARS-CoV-2 was reported through **1 Immediate notification** by **Slovenia** in a **pet ferret**
- SARS-CoV-2 was reported through **2 Follow-up reports** by **Switzerland** in **cats** and **dogs**
- SARS-CoV-2 was reported through **2 Follow-up report** by **United States of America** in **American minks** and a **cat**

Relevant epidemiological comments from countries:

- **Argentina (cats, dogs and a tiger affected):** “Analysis is being carried out within the framework of research developed by projects financed by the national agency for the promotion of research, technological development and innovation carried out under the aegis of the coronavirus unit of the MINCyT-AGENCIA-CONICET. This project performs diagnosis of companion animals living with people affected by COVID-19”.
- **Canada (white-tail deer affected):** “The SARS-CoV-2 positive white-tailed deer from Saskatchewan and Ontario are additional results of an ongoing cross-jurisdictional study undertaken by several federal, provincial, territorial and academic partners to monitor wild cervids across Canada for the presence of SARS-CoV-2”.

³ https://www.oie.int/fileadmin/Home/MM/A_Sampling_Testing_and_Reporting_of_SARS-CoV-2_in_animals_3_July_2020.pdf

- **Hong Kong (hamsters affected):** *“SARS-CoV-2 was detected in multiple hamsters and/or environmental swabs from a pet shop and its warehouse. The samples were collected because a staff at the pet shop (who had not been to the warehouse) was tested positive for COVID-19 and was found to be infected with a Delta strain of virus that has never been detected in Hong Kong. All animals (small mammals – hamsters, mice, guinea pigs, chinchillas, rabbits) in the pet shop and warehouse were humanely dispatched to minimize the potential risks of COVID-19 infection and safeguard public safety. Hamsters from all pet shops in Hong Kong were sampled for testing and humanely dispatched, and the other animals of these pet shops had been tested. Business for the majority of the pet shops had resumed upon receiving satisfactory results. Import of small mammals has also been suspended. As the hamsters from the index pet shop were imported from Europe with the last two consignments arriving on 22/12/21 and 7/1/22, members of public are also urged to surrender their hamsters purchased from local pet shops after 22/12/21 to the government for testing and humane dispatch. As of 23/1/2022, samples from hamsters in another pet shop outlet under the same group, multiple environmental samples from various outlets under this group and one surrendered hamster were tested positive. Sequencing results from the regional WHO reference laboratory indicates that the viral sequences from the hamsters are highly similar to that of the pet shop worker, and are similar to AY.127 sequences found in human cases in Europe. Further testing and epidemiological investigation is continuing. Members of public and the veterinary community will be kept abreast of the development via government announcements”.*
- **Slovenia (pet ferret affected):** *“ferret (pet animal) with clinical signs”.*
- **United States of America (American minks and cat affected):** *“Update 14 January 2022 Nevada (NV) - A domestic cat from a known positive COVID-19 household was confirmed positive for SARS-CoV-2 at the National Veterinary Services Laboratories based upon molecular testing (PCR and sequencing). The cat showed clinical signs of lethargy, sneezing, nasal discharge and general malaise. This cat also tested positive for Bordetella at a private laboratory. Control measures were discussed with the owner including isolation, cleaning and disinfection. The cat has recovered. This represents a new state with detection of a positive SARS-CoV-2 animal, but not a new species for the U.S. There is a single SARS-CoV-2 event occurrence in the United States of America, however, for WAHIS technical reasons, any new outbreaks in the country will be reported in this new event and not in the one first reported in April 2020. For more details about SARS-CoV-2 testing of animals in the United States, see: <https://www.aphis.usda.gov/aphis/dashboards/tableau/sars-dashboard>”*
- **Switzerland (cats and dogs affected):** *“These cases were detected in the framework of a research project on pet animals of owners who were infected with SARS-CoV-2. The project is under the responsibility of the Clinical Laboratory of the Vetsuisse Faculty (VSF) of the University of Zurich (UZH). The Swiss government does not recommend currently to test cats or dogs for SARS-CoV-2 but supports research to increase knowledge in the field. For the time being, COVID-19 continues to be treated as a human disease with the main route of transmission between human beings”.*

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

- OIE Ad hoc Group on COVID-19 at the Animal-Human Interface - https://old.oie.int/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 - [Statement from the Advisory Group on SARS-CoV-2 Evolution in Animals concerning the origins of Omicron variant - OIE - World Organisation for Animal Health](#)
- Evidence for a mouse origin of the SARS-CoV-2 Omicron variant - <https://www.sciencedirect.com/science/article/pii/S1673852721003738?via%3Dihub#!>
- Chilean zoo jabs big cats, orangutan against Covid-19 - <https://www.france24.com/en/live-news/20220104-chilean-zoo-jabs-big-cats-orangutan-against-covid-19>
- Surveillance of Rodent Pests for SARS-CoV-2 and Other Coronaviruses, Hong Kong - [Surveillance of Rodent Pests for SARS-CoV-2 and Other Coronaviruses, Hong Kong - Volume 28, Number 2—February 2022 - Emerging Infectious Diseases journal - CDC](#)
- Pigs are highly resistant to SARS-CoV-2 infection - [Pigs are highly resistant to SARS-CoV-2 infection • Earth.com](#)
- Serological screening suggests single SARS-CoV-2 spillover events to cattle - [Serological screening suggests single SARS-CoV-2 spillover events to cattle | bioRxiv](#)
- Anti-SARS-CoV-2 antibodies found in wild mustelids in France - <https://www.news-medical.net/news/20220126/Anti-SARS-CoV-2-antibodies-found-in-wild-mustelids-in-France.aspx>