

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 August 2021**, around **220 million** confirmed human cases have been reported worldwide, with more than **4.5 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

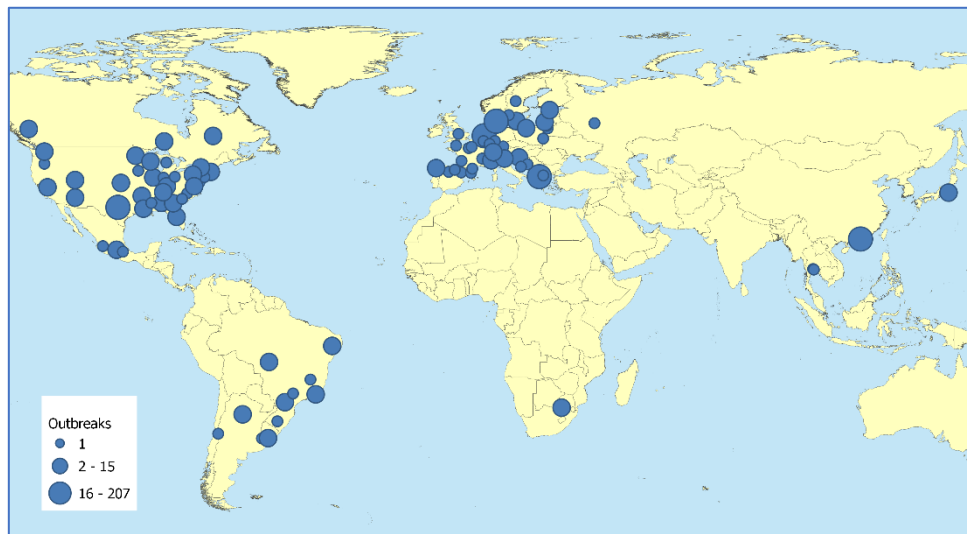


Figure 1. Worldwide distribution of SARS-CoV-2 outbreaks in ten animal species reported to the OIE (as of 31 August 2021). Note that dot size on the map is proportional to the number of outbreaks reported.

Table 1 shows the global distribution of animal infections with SARS-CoV-2. Thirty countries in the Americas, Africa, Asia, and Europe have reported the occurrence of the disease, in twelve different animal species (cats, dogs, mink, otter, pet ferrets, lions, tigers, pumas, snow leopards, gorillas, white-tailed deer and amur leopard).

Table 1. Number of outbreaks (n=572) reported worldwide, by species and region (as of 31 August 2021).

Region	Species											
	Cats	Dogs	Mink	Otter	Pet ferrets	Lions	Tigers	Pumas	Snow leopards	Gorillas	White-tailed deer	Amur leopard
<i>Africa</i>						1		1				
<i>Americas</i>	67	67	20	1		2	7+	2	2+	1	1	+
<i>Asia</i>	11	16										
<i>Europe</i>	24	7	338		1	2*	1*					
TOTAL	102	90	358	1	1	5	8	3	2	1	1	+

*One lion and one tiger in Sweden are from the same location and are therefore only represented as 1 outbreak in this table. *One lion, one amur leopard and one snow leopard in the USA are from the same location and are therefore only represented as 1 outbreak in this table.

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 (01/08/2021 - 31/08/2021)

During the last month **8 outbreaks** have been reported or updated by **6 countries (Greece, Japan, Spain, Sweden, United Kingdom and United States)** in **6 animal species (dog, mink, amur leopard, snow leopard, tiger, white-tailed deer)**. The recent distribution of outbreaks is reported in Figure 2.

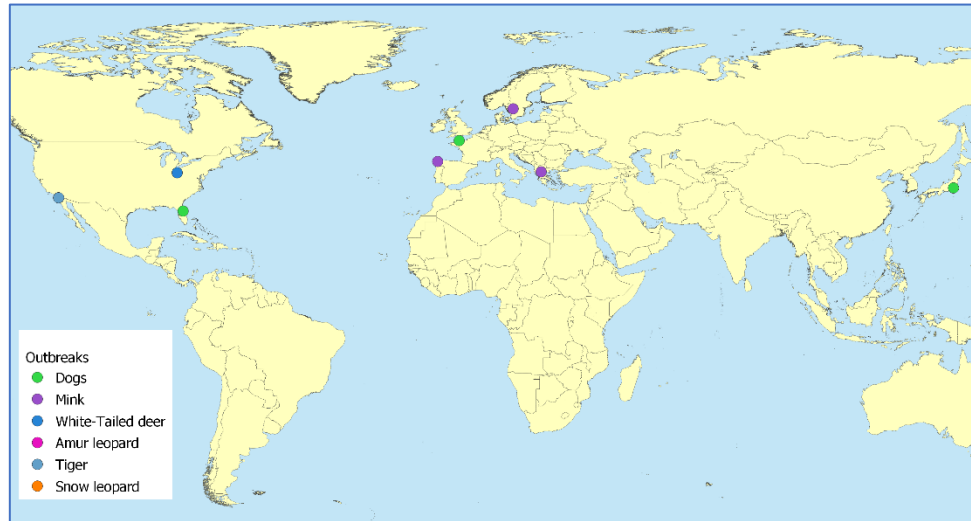


Figure 2. Worldwide recent distribution of SARS-CoV-2 outbreaks reported to the OIE (01/08/2021 - 31/08/2021).

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, **572 outbreaks** in animals have been reported globally, affecting **12 species** in **30 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 **Spain**
- SARS-CoV-2 was reported through **1** Immediate notifications by **Sweden**
- SARS-CoV-2 was reported through **1** Immediate notifications by **United Kingdom**
- SARS-CoV-2 was reported through **1** Follow-up report by **United States of America** in **2** new host species: **Amur leopard and white-tailed deer**

Relevant epidemiological comments from countries:

- **Spain (mink farm affected)** *“The positive laboratory result was obtained during the routine active surveillance that Spain carries out in all such farms whereby nasopharyngeal swabs are collected from up to eight dead animals in the farm every 15 days. Until this positive result was obtained in the farm, there was no evidence of abnormally increased mortalities or signs consistent with the disease in the animals.”*
- **Sweden (mink farm affected)** *“SARS-CoV-2 nucleic acids was detected using qRT-PCR in one out of six tracheal swabs sampled from mink found dead on the farm. Whole genome sequencing of the virus has been carried out demonstrated that the virus belongs to sub-lineage B1.1.464 of SARS-CoV-2. [...] Whereas this is the first case detected in Sweden during 2021, SARS-CoV-2 (sub-lineage B1.1.39) was detected in 13 farms, all located in Sölvesborg, the County of Blekinge, in*

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

November 2020. Moreover, a serological screening carried out in December 2020 and which covered the majority of mink fur farms active at the time (26 out of 28), suggested that most of them had been exposed to the virus.”.

- **United Kingdom (dog affected):** “A domestic dog from a COVID positive household was tested positive for SARS-CoV-2 by PCR. [...] There is sufficient evidence that the dog was infected with SARS-CoV-2. However, there is insufficient evidence to demonstrate if the dog was clinically affected by the virus and the dog had other significant underlying health conditions. Origin of the infection suspected to be direct contact with person diagnosed with COVID-19.”
- **United States of America:** “27 Aug 2021 Update Ohio (OH): Wild white-tailed deer were confirmed positive for SARS-CoV-2 at the National Veterinary Services Laboratories (NVSL) based upon molecular testing (PCR and sequencing). These are the first deer confirmed with SARS-CoV-2, although earlier studies in the U.S. have shown both that deer can be experimentally infected with the virus and that some wild deer had antibodies to the virus.”

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
- FAO-OIE Advisory Group on SARS-CoV-2 Evolution in Animals <https://www.oie.int/app/uploads/2021/09/5th-call-advisory-group-sars-cov2-evolution-in-animals.pdf>
- [Infection and transmission of ancestral SARS-CoV-2 and its alpha variant in pregnant white-tailed deer | bioRxiv](#)
- Up to 40% of wild deer population in US exposed to coronavirus, study finds - [Up to 40% of wild deer population in US exposed to coronavirus, study finds | The Independent](#)
- Animal sales from Wuhan wet markets immediately prior to the COVID-19 pandemic <https://www.nature.com/articles/s41598-021-91470-2>
- SARS-CoV-2 antibodies seroprevalence in dogs from France using ELISA and an automated western blotting assay - <https://pubmed.ncbi.nlm.nih.gov/34377760/>