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CORONAVIRUS DISEASE 2019 UPDATE (334): ANIMAL, NETHERLANDS, MINK, SPREAD, UK, CAT, FIRST REPORT, OIE
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A ProMED-mail post
http://www.promedmail.org
ProMED-mail is a program of the
International Society for Infectious Diseases
http://www.isid.org

In this update:
[1] Netherlands (North Brabant), mink, spread, control
[2] UK (England) cat, 1st case

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[1] Netherlands (North Brabant), mink, spread, control
Date: Mon 27 Jul 2020
Source: Press release, Government of the Netherlands [in Dutch, trans. Mod.AS, edited]
https://www.rijksoverheid.nl/actueel/nieuws/2020/07/27/nieuwe-besmetting-covid-19-bij-nertsenbedrijf

An infection with SARS-CoV-2 has been detected at a mink company in Oploo [North Brabant]. It is a farm with 3500 dams.

The contamination was brought to light by means of the early warning monitoring system with which all cadavers are tested weekly for the virus. The holding will be culled as soon as possible.

A total of 26 mink farms in the Netherlands have now been declared infected. All 25 previously infected farms, in which SARS-CoV-2 was established, have been culled.

In view of the recently found infections, ministers Hugo de Jonge (Health, Welfare and Sport) and Carola Schouten (Agriculture, Nature and Food Quality), in tandem with the fur farming sector and experts, have tightened up the hygiene protocol. There is also a national transport ban upon mink, and the Faculty of Veterinary Medicine is conducting in-depth research into possible routes of the virus spread.

In addition, at the request of ministers De Jonge and Schouten, the OMT-Z [Outbreak Management Team for Zoonoses; see comment in 20200716.7578453] once again delivered their advice on the situation at mink companies. The public health risk of mink companies is unchanged, according to OMT-Z. Companies must adhere strictly to the prescribed measures to prevent the introduction of viruses. This includes the obligation to register visitors, to apply hygiene measures (such as wearing personal

protective equipment) and to follow up the test regime for caregivers with COVID-19 complaints. The policy with regard to testing employees on mink farms will also be further elaborated in collaboration with the GGD [Municipal Public Health Service].

The government is working on a quit scheme with which mink companies can voluntarily terminate their business operations in the short term. In 2024, mink farms will stop their activities in accordance with the legal prohibition.

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[Sint Antonis, the municipality in which the 26th COVID-19 outbreak in mink has been detected, is known in the Netherlands as the "mink capital." It is composed of several communities. During July, some 10 000 mink have already been culled there, in the communities Ledeacker, Landhorst, and Westerbeek. Earlier, 5 farms in Landhorst had been culled. This information has been published by the local daily "De Gelderlander" (at https://www.gelderlander.nl/st-anthonis/coronavirus-bij-nertsenfokkerij-in-oploo-3500-dieren-moeten-worden-geruimd~a485139b/; in Dutch).

The Dutch policy addressing the control of COVID-19-infected mink farms and the preventive measures in the remaining farms is based upon the scientific advice of an experts' team headed by Prof. JT van Dissel, initially published on 3 Jun 2020, available at https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/COV-19/A_Advies_69e_OMT-Z-COVID-19_en_nertsen.pdf. - Mod.AS

HealthMap/ProMED map of the Netherlands: https://promedmail.org/promed-post?place=7617582,67110]

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[2] UK (England) cat, 1st case
Date: Mon 27 Jul 2020
Source: Daily Mail [abridged, edited]
https://www.dailymail.co.uk/news/article-8564481/Pet-cat-animal-UK-catch-Covid-19.html

A pet cat has become the 1st animal in the UK to be diagnosed with COVID-19, it was revealed today [Mon 21 Jul 2020].

Officials believe the cat -- which wasn't identified -- caught the coronavirus from its owners and "not the other way round."

Downing Street said the feline, from England, had shown respiratory symptoms including shortness of breath.

Both the cat and its owners have made a full recovery, and there was no transmission of the virus to other animals or people in the household, health bosses said.

The cat was confirmed to have the virus after being tested at the Animal and Plant Health Agency (APHA) laboratory in Weybridge last Wednesday.

Yvonne Doyle, medical director at Public Health England, said: "The pet cat was initially diagnosed by a private vet with feline herpesvirus, a common cat respiratory infection, but the sample was also tested for SARS-CoV-2 as part of a research programme. Follow-up samples tested at the APHA laboratory in Weybridge confirmed the cat was also co-infected with SARS-CoV-2, which is the virus known to cause COVID-19 in humans."

The advice from Public Health England is for people to wash their hands regularly, including before and after contact with animals.

Commenting on the case, Professor Jonathan Ball, molecular virology at University of Nottingham, said: "We know that domestic animals like cats and dogs can be infected with the SARS2 coronavirus, but the evidence suggests that the animals don't get sick.

They produce very low levels of virus, which is why we don't think they can transmit the virus to humans. The best thing you can do to protect your pets is to avoid close contact if you are, or think you might be, infected with the virus."

Pankaj KC, World Animal Protection head of programmes for animals in communities, said: "Pet owners with COVID-19 should avoid contact with your pet where possible and have another member of your household care for your animals while you are sick. If you must care for your pet or be around animals while you are sick, wash your hands before and after you interact with pets, and wear a facemask. If your animal does become sick, go to the vets as normal."

A team of scientists at the University of Glasgow Centre for Virus Research (CVR) are screening hundreds of samples for COVID-19 infections in the UK cat population. They have now completed a full genome sequencing of the virus found in the infected cat from England.

Professor Margaret Hosie, who works on the project, said: "There have been sporadic reports of cats from COVID-19 households in Hong Kong, Belgium, France, Germany, Switzerland, Spain and the USA that tested positive for SARS-CoV-2 and were presumed to be infected from their owners, but this is the 1st report of an infected cat in the UK."

Professor William Weir, of CVR, who helped diagnose the British cat, said: "At present, there is no evidence that cats, dogs, or other domestic animals play any role in the epidemiology of human infections with SARS-CoV-2."

He said the factors that govern why one species is susceptible to the COVID-19 virus while others are more resistant are currently unknown.

Cats, ferrets, and hamsters have been shown to be susceptible to the virus, whereas ducks, chickens, and pigs appear not to be.

"Furthermore, the significance of SARS-CoV-2 as a feline or canine pathogen is unknown as cats and dogs with reported infections usually recover, and there has been no evidence of transmission occurring between cats or dogs in the field," Professor Weird said.

The case has been reported to the World Organisation for Animal Health in line with international commitments [see https://www.oie.int/wahis_2/public/wahid.php/Reviewreport/Review?page_refer=MapFullEventReport&reportid=35182.]

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[HealthMap/ProMED map of England, United Kingdom: https://promedmail.org/promed-post?place=7617582,279

OIE's immediate notification includes the following epidemiological comments:
"A domestic cat in a COVID-19-positive household tested positive for SARS-CoV-2 on PCR. The cat showed respiratory signs indicative of feline herpesvirus, and a swab was taken in May [2020] to confirm this. The feline herpesvirus test was positive, and the SARS-CoV-2 test was performed within a surveillance project in a private laboratory. Upon receiving the result, the private veterinarian notified the Animal and Plant Health Agency (APHA) and the initial sample, a new oral swab and a new blood sample (both taken in July [2020]) were retested. The initial sample was positive; the new oral swab was negative, and the blood sample was positive in the viral neutralization test. A 2nd house cat was negative for PCR and viral neutralization. The positive cat has fully recovered, and, since the PCR was negative and the antibody positive, the case is considered resolved. Nota bene: The location used for the outbreak is that of the Weybridge National Laboratory, to protect any data related to human cases."

At the time of writing, UK's OIE report has not yet been added to OIE's COVID-19 Portal, available at https://www.oie.int/en/scientific-expertise/specific-information-and-recommendations/questions-and-answers-on-2019novel-

coronavirus/events-in-animals/. The portal includes a list of OIE Members, which have been keeping the OIE updated on any investigations or outcomes of investigations in animals. The current list (to which the UK report is soon to be added) includes the following countries and relevant details, with live links:

1. Animal surveillance in China: China update (5 Feb 2020).
2. SARS-CoV-2 positive test results in dogs in Hong Kong: Follow-up report no. 1 (9 Mar 2020), Follow-up report no. 2 (16 Mar 2020), Follow-up report no. 3 (23 Mar 2020).
3. SARS-CoV-2 positive test result in a cat in Belgium (28 Mar 2020).
4. SARS-CoV-2 positive test result in a tiger (6 Apr 2020) a lion (17 Apr 2020) and a dog (3 Jun 2020) in the USA.
5. SARS-CoV-2 positive test result in 2 domestic cats in the USA (22 Apr 2020), Follow-up reports latest (2 Jul 2020).
6. SARS-CoV-2 positive test result in 2 mink farms in The Netherlands (26 Apr 2020), situation update 1 (15 May 2020), situation update 2 (9 Jun 2020), situation update 3 (16 Jul 2020).
7. SARS-CoV-2 positive test result in 2 domestic cats in France 1st (2 May 2020) and 2nd (12 May 2020).
8. SARS-CoV-2 positive test result in domestic cats in Spain 1st (11 May 2020) and 2nd (8 Jun 2020). SARS-CoV-2 positive test result in a mink farm in Spain (16 Jul 2020)
9. SARS-CoV-2 positive test result in a domestic cat in Germany (13 May 2020).
10. SARS-CoV-2 positive test result in a domestic cat in Russia (26 May 2020).
11. SARS-CoV-2 positive test result in a mink farm in Denmark (17 Jun 2020), situation update 1 (3 Jul 2020).

China's report is of obvious significance in view of the pandemic's history. The text, submitted on 5 Feb [2020], included OIE's questions and China's delegate's answers:

Latest information provided by the OIE Delegate for the People's Republic China on 5 Feb 2020
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1. Have any investigations (epidemiological or laboratory) been carried out to investigate the animal or environmental source of the virus?

- According to investigations conducted by the Chinese health department, most of the early human cases originated from a wild animal market in Wuhan, and the 2019-novel coronavirus virus strain (2019-nCov) that caused the human epidemic was isolated in environmental samples collected from the market. At present, investigations are being carried out to trace the species of wild animal from which the virus originated.

After the detection of human cases, veterinary departments of China have carried out 2019-nCoV testing towards samples of pigs, poultry and dogs and other domestic animal animals collected since 2019 (mainly in late 2019). So far, results of such testing are all negative.

Molecular epidemiology analysis indicates that the 1st published sequence of 2019-nCoV (WHHuman 1/China/2019-Dec) released by the Chinese Health Department shows high homology (87.99%) to bat-derived coronavirus, and low homology (lower than 66%) to the whole genome of domestic animal-derived coronavirus (such as IBV, PEDV, TGEV, etc.)

2. Is there any ongoing monitoring plan in animals for the detection of the new virus?

- For many years, veterinary services of China have been carrying out surveillance towards avian-derived coronaviruses such as avian infectious bronchitis virus, swine-derived coronaviruses such as porcine epidemic diarrhea virus, and domestic animal derived coronaviruses such as mink coronavirus, in order to monitor the infection of livestock and avian for coronavirus.

3. Did you isolate the virus from some non-human hosts? If so from what species or samples?

- Chinese health and veterinary departments have launched a joint project to trace back the source of the 2019-nCov. So far, the virus has not been isolated from non-human hosts.

4. Is there any evidence of the transmission of the virus between animals and humans?

- According to results of investigations made by the Health Departments of China, it's quite highly possible that the 2019-nCoV derives from wild animals. The Chinese Health and Veterinary Departments have jointly launched researches on this subject. So far, it is still not possible to confirm whether the virus can be transmitted from humans to domestic animals or whether domestic animals can be infected and spread to each other. In addition, while scientifically responding to human epidemics, relevant Chinese authorities have strengthened wildlife supervision, as well as prevention and control of major animal diseases. The Ministry of Agriculture and Rural Affairs of the People's Republic of China, the State Administration for Market Regulation, and the State Forestry and Grassland Administration have jointly issued notices and announcements to strengthen the prevention and control of wildlife diseases and prohibit illegal wildlife trade. Continuous efforts will be made to effectively prevent and control major animal diseases such as African swine fever and highly pathogenic avian influenza. At present, the situation of major animal epidemics in the country is generally stable.

ProMED-mail published its own RFI addressing China's animal-related COVID-19 situation (5 questions in 20200210.6972104).

The animal-related aspects of the COVID-19 pandemic during its early stage in Wuhan have been addressed recently in the "Reply to Science Magazine" by China's leading coronavirus expert, Dr Shi Zhengli, published 22 Jul 2020 (see https://www.sciencemag.org/sites/default/files/Shi%20Zhengli%20Q%26A.pdf; thanks to Mary Marshall for its communication). The document includes a total of 20 questions and their answers; the 5 questions addressing animal health (Nos. 5, 6, 7, 8 and 12) and their corresponding answers follow:

"5. An early cluster at the Huanan seafood market in Wuhan led many to think that an animal there somehow infected humans. How has your thinking about the seafood market's role evolved as it became clear that many of the earliest cases are not linked to it?
A: As you pointed out, some early patients do not have a history of Huanan seafood market exposure. We detected SARS-CoV-2 nucleic acids in environmental samples from sources such as rolling door handles, the ground and sewage in that market, but we did not detect any SARS-CoV-2 nucleic acids in frozen animal samples [of mammals/fish/seafood? - Mod.AS]. The Huanan seafood market may just be a crowded location where a cluster of early novel coronavirus patients were found.

6. Do you know whether anyone tested animals from the market? If not, why not?
A: Under the deployment of Hubei Provincial Government, our team, alongside researchers from Huazhong Agricultural University, collected environmental samples and frozen animal samples in Huanan seafood market. We detected SARS-CoV-2 nucleic acids only in the environmental samples such as roller shutter door handles, the ground and sewage, but not in the animals.

7. Is there an attempt to use registries from the market to test farms that supplied animals to the market? Has your group or any other done testing of domesticated animals or wild animal farms at any farms for SARS-CoV-2 like viruses? If so, what has research found?
A: Under the deployment of the Hubei Provincial Government, our team and researchers from Huazhong Agricultural University collected samples of farmed animals and livestock from farms around Wuhan and in other places in Hubei Province. We did not detect any SARSCoV-2 nucleic acids in these samples.

8. Were you ever given environmental or animal samples from the market to test yourself? If so, what did you find? If not, what do you know about the market samples tested?
A: We detected SARS-CoV-2 nucleic acids in environmental samples from the Wuhan seafood market, including on rolling door handles, on the ground and in sewage, but the detected numbers of viral genome copies were very low.

12. Have you or anyone else you're aware of contacted veterinarians about possible illnesses in animals that occurred that could be SARS-CoV-2 relatives? If so, what have you learned?
A: No. I don't have any information on that."

ProMED-mail's question No. 5 in the mentioned RFI ("Were the (state/local) Veterinary Services involved throughout the procedures above?") in relation to the Huanan Seafood market, remains pending. - Mods.AS/CRD]

See Also

COVID-19 update (319): Spain (AR) animal, farmed mink, 1st rep 20200717.7584560
COVID-19 update (317): Netherlands (NB) animal, farmed mink, spread 20200716.7578453
COVID-19 update (322): USA (SC) animal, dog 20200719.7588843
COVID-19 update (312): China, SARS-CoV2 origin, animal reservoir, WHO mission 20200711.7565035
COVID -19 update (308): USA (TX) animal, dog conf. 20200708.7554832
COVID-19 update (299): USA (GA) animal, dog conf 20200703.7535112
COVID-19 update (284): Denmark (ND) animal, farmed mink, spread, dog 20200624.7506728
COVID-19 update (281): Netherlands (NB, LI) farmed mink, spread, animal, global 20200623.7502849
COVID-19 update (280): animal, pangolin, research 20200623.7502805
COVID-19 update (267): animal, domestic, wild, cat, research 20200617.7480013
COVID-19 update (266): Denmark (ND) animal, farmed mink, 1st rep 20200617.7479510
COVID-19 update (251): Netherlands (NB, LI) animal, farmed mink, spread, culling 20200610.7453845
COVID-19 update (248): Netherlands (NB, LI) animal, mink, spread, culling, cat 20200609.7446478
COVID-19 update (238): USA (MN) animal, cat 20200605.7429133
COVID-19 update (236): Netherlands (NB, LI) animal, farmed mink, spread, culling 20200604.7427849
COVID-19 update (231): USA (NY) animal, dog conf. 20200602.7420541
COVID-19 update (230): Netherlands (NB, LI) animal, farmed mink, spread, control 20200602.7420433
COVID-19 update (227): animal, cat, dog, research, experimental infection 20200601.7416648
COVID-19 update (215): Netherlands (NB) animal, mink-to-human, epidem., control 20200527.7385049
COVID-19 update (212): Russia (Moskva) animal, cat, OIE 20200526.7379578
COVID-19 update (209): Netherlands (NB) farmed mink, animal-to-human, cat, epid 20200525.7375359
COVID-19 update (198): Netherlands (NB) farmed mink, animal-to-human infect susp 20200520.7359976
COVID-19 update (189): Netherlands (NB) animal, farmed mink, research, cat, dog 20200517.7344274
COVID-19 update (183): Japan/USA, animal, research, cat, experimental infection 20200514.7337185
COVID-19 update (181): Germany (BY), France (AC), cat, OIE animal case definition 20200513.7332909
COVID-19 update (177): Netherlands (NB) animal, farmed mink, Spain (CT) cat susp 20200512.732858
COVID-19 update (174): Netherlands (NB) animal, farmed mink, comment 20200511.7323845
COVID-19 update (169): Netherlands (NB) animal, farmed mink, spread, rabbit susp 20200509.7316646
COVID-19 update (154): Netherlands (NB) animal, farmed mink, research 20200503.7294846
COVID-19 update (146): Netherlands (NB) animal, farmed mink, epidemiology 20200501.7286113
COVID-19 update (143): USA (NY) animal, zoo, tiger, lion, tests 20200430.7284183
COVID-19 update (141): India, animal, wild tiger, susp, clarification, RFI 20200430.7281768
COVID-19 update (138): India, animal, wild tiger, fatal 20200428.7275765
COVID-19 update (135): Netherlands (NB) animal, farmed mink 20200427.7272289
COVID-19 update (130): USA (NY) animal, zoo, tiger, lion, new cases 20200425.7266556
COVID-19 update (124): USA (NY) animal, cat, lion, OIE 20200423.7259119
COVID-19 update (123): USA (NY) animal, cat, conf 20200422.7256272
COVID-19 update (113): USA (NY) cat, animal, susp, RFI 20200418.7240811
COVID-19 update (88): Germany, animal, research, pig, chicken, bat, ferret 20200407.7196506
COVID-19 update (85): USA (NY) animal, tiger, OIE 20200406.7191480
COVID-19 update (84): USA animal, tiger 20200406.7191352
COVID-19 update (76): China (HU) animal, cat, owned, stray, seropositive 20200403.7179946
COVID-19 update (75): China (Hong Kong) animal, cat, OIE 20200403.7179945
COVID-19 update (70): China (Hong Kong) animal, cat, pets & stock 20200402.7173286
COVID-19 update (58): Belgium, animal, cat, clinical case, RFI 20200327.7151215
COVID-19 update (56): China (Hong Kong) animal, dog, final serology positive 20200326.7146438
COVID-19 update (50): China (Hong Kong) animal, dog, 2nd case PCR positive, OIE 20200323.7129951

COVID-19 update (45): China (Hong Kong) animal, dog, 2nd case PCR positive 20200319.7112693
COVID-19 update (37): China (Hong Kong) animal, dog, prelim. serology negative 20200312.7081842
COVID-19 update (30): China (Hong Kong) animal, dog, susp, serology pending 20200306.7057595
COVID-19 update (25): China (Hong Kong) animal, dog, susp, OIE 20200302.7040373
COVID-19 update (22): companion animal, dog susp, RFI 20200229.7036661
COVID-19 update (17): China, animal reservoir, wildlife trade & consumption 20200225.7024245
COVID-19 update (11): animal reservoir, intermediate hosts, pangolin susp 20200220.7009213
COVID-19 update (08): companion animal, RFI 20200218.7002276
COVID-19 update (06): animal reservoir, intermediate hosts 20200217.6997782
Novel coronavirus (40): animal reservoir, pangolin poss intermediate host, RFI 20200210.6972104
Novel coronavirus (28): China (HU) animal reservoir 20200201.6943858
Novel coronavirus (22): reservoir suggested, bats 20200129.6930718
Novel coronavirus (20): China, wildlife trade ban 20200127.6922060
Novel coronavirus (18): China (HU) animal reservoir 20200125.6915411
Novel coronavirus (15): China (HU) wild animal sources 20200123.6909913
Novel coronavirus (03): China (HU) animal reservoir suggested, RFI 20200114.6887480
Novel coronavirus (01): China (HU) WHO, phylogenetic tree 20200112.6885385
Undiagnosed pneumonia - China (HU) (10): genome available, Hong Kong surveill. 20200111.6883998
Undiagnosed pneumonia - China (HU) (07): official confirmation of novel coronavirus 20200108.6878869
Undiagnosed pneumonia - China (05): (HU) novel coronavirus identified 20200108.6877694
Undiagnosed pneumonia - China (01): (HU) wildlife sales, market closed, RFI 20200102.6866757
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Undiagnosed pneumonia - China (HU): RFI 20191230.6864153
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