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CORONAVIRUS DISEASE 2019 UPDATE (33): ANIMAL, SWEDEN, ZOO, TIGER, LION

A ProMED-mail post

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Date: Sun 24 Jan 2021

From: Karl Stahl <Karl.Stahl@sva.se> [edited]

Please find below information on SARS-CoV-2 confirmed in a tiger and 2 lions at a Zoo in Sweden.

On [13 Jan 2021], The National Veterinary Institute (SVA) confirmed SARS-CoV-2 in a tiger held in a Zoo in Sweden. Samples from the same animal were simultaneously sent to IDEXX laboratories, Germany, where SARS-CoV-2 also was confirmed [14 Jan 2021].

Whole-genome sequencing at the SVA showed that the virus belongs to the global lineage B.1.177.21.

Necropsy was performed at the SVA on [16 Jan 2021]. Macroscopical lesions of the respiratory tract were mild and unspecific. Convincing signs of pneumonia were not seen. Some blood-tinged mucus was present in the lower part of the trachea and bronchi. Findings in other organs were preliminary considered to be age related and thus probably not related to SARS-CoV-2. Results from histological examinations are pending.

The tiger was a 17-year-old female, which was euthanised [11 Jan 2021] for animal welfare reasons due to severe respiratory and neurological symptoms, high age, and low possibilities for recovery. The symptoms started with loss of appetite [9 Jan 2021], but rapidly worsened [11 Jan 2021] in the morning and the animal was euthanised and sampled the same morning. A male tiger kept in the same enclosure as the female has shown moderate respiratory symptoms, but no neurological symptoms.

A group of lions, consisting of 2 adults and 2 subadults, kept in the same house, have also shown mild respiratory symptoms but no neurological symptoms and are otherwise clinically unaffected with normal appetite. Fecal samples from the lions, received at a later date, were also confirmed positive for SARS-CoV-2.

Staff taking care of these groups of animals also had symptoms: one of the sick persons tested positive for SARS-CoV-2/Covid-19, while 3 more are awaiting their results.

The Zoo is closed for the season, and further internal biosafety measures have been taken by the responsible veterinarian on site.

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[Infection by SARS-CoV-2 has been confirmed so far in carnivores (Order Carnivora) of 3 families, canids (dogs and raccoon dogs), felids (cats, tigers, lions, puma/cougar, and snow leopard), and mustelids (ferrets and minks). Lions and tigers experienced respiratory disease due to COVID-19 in USA at the Bronx Zoo (New York) in April 2020 and tigers with mild respiratory sings tested positive at Zoo Knoxville (Tennessee) in October 2020. Lions were infected at the Barcelona Zoo (Spain) in December 2020. All infections detected in carnivores were from animals held captive, except for the recent record of a wild mink captured and sampled in Utah (USA). The susceptibility of carnivores warrants surveillance and research in wild populations, as introduction and possible establishment of SARS-CoV-2 in those populations might result in conservation problems and/or compartments in which the virus might evolve and remain with potential for future human exposures. - Mod.PMB

HealthMap/ProMED map:
Sweden: <https://promedmail.org/promed-post?place=8134087,108>]

See Also

COVID-19 update (13): animal, USA, zoo, gorilla 20210112.8095510
2020

COVID-19 update (538): USA, animal, zoo, snow leopard 20201214.8017000
COVID-19 update (525): Spain, animal, zoo, lion, human 20201208.8002466
COVID-19 update (469): USA (TN) zoo, tiger 20201104.7915683
COVID-19 update (356): South Africa (GT) animal, puma, zoo, OIE 20200813.7673666
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) zoo, tiger, lion, new cases 20200425.7266556
COVID-19 update (85): USA (NY) tiger, OIE 20200406.7191480
COVID-19 update (84): USA, tigers 20200406.7191352
COVID-19 update (76): China (HU) animal, cat, owned, stray, seropositive 20200403.7179946
COVID-19 update (75): China (Hong Kong) cat, OIE 20200403.7179945
COVID-19 update (70): China (Hong Kong) cat, pets & stock 20200402.7173286
COVID-19 update (58): Belgium, cat, clinical case, RFI 20200327.7151215
COVID-19 update (57): global, re-using PPE, DR Congo, more countries, WHO 20200327.7149046
COVID-19 update (56): China (Hong Kong) animal, dog, final serology positive 20200326.7146438
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) dog, susp, serology pending 20200306.7057595
COVID-19 update (25): China (Hong Kong) dog, susp, OIE 20200302.7040373
COVID-19 update (22): companion animals, 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 animals, RFI 20200218.7002276

COVID-19 update (06): animal reservoir, intermediate hosts 20200217.6997782

Novel coronavirus (42): China, global, COVID-19, SARS-CoV-2, WHO 20200211.6979942

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) (07): official confirmation of novel coronavirus 20200108.6878869

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