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CORONAVIRUS DISEASE 2019 UPDATE (13): ANIMAL, USA, ZOO, GORILLA

A ProMED-mail post http://www.promedmail.org ProMED-mail is a program of the International Society for Infectious Diseases http://www.isid.org

Date: Mon 11 Jan 2021

Source: San Diego Zoo [edited]

https://zoo.sandiegozoo.org/pressroom/news-releases/gorilla-troop-san-diego-zoo-safari-park-test-positive-covid-19

Members of the Gorilla Troop at the San Diego Zoo Safari Park have tested positive for SARS-CoV-2, the virus that causes COVID-19. On Wednesday [6 Jan 2021], 2 of the gorillas began coughing. Given current circumstances, San Diego Zoo Global initiated the process of testing fecal samples from the gorillas for SARS-CoV-2 through the California Animal Health and Food Safety Laboratory System (CA HFS). On [8 Jan 2020], the preliminary tests detected the presence of the virus in the gorilla troop. The US Department of Agriculture (USDA) National Veterinary Services Laboratories (NVSL) confirmed the positive results on Monday [11 Jan 2021].

The test results confirm the presence of SARS-CoV-2 in some of the gorillas and does not definitively rule out the presence of the virus in other members of the troop.

"Aside from some congestion and coughing, the gorillas are doing well," said Lisa Peterson, executive director, San Diego Zoo Safari Park. "The troop remains quarantined together and are eating and drinking. We are hopeful for a full recovery."

It is suspected the gorillas acquired the infection from an asymptomatic staff member, despite following all recommended precautions including COVID-19 safety protocols from the Centers for Disease Control and Prevention (CDC) and San Diego County Public Health as well as wearing PPE [personal protective equipment] when near the gorillas. Research studies have verified that some non-human primates are susceptible to infection with SARS-CoV-2, but this is the 1st known instance of natural transmission to great apes and it is unknown if they will have any serious reaction.

"For almost one year our team members have been working tirelessly, with the utmost determination to protect each other and the wildlife in our care from this highly contagious virus," said Peterson. "The safety of our staff and the wildlife in our care remains our number one priority."

San Diego Zoo Global's wildlife care professionals and conservationists have cared for family groups of gorillas at the San Diego

Zoo and San Diego Zoo Safari Park for decades and contribute their expertise in efforts to protect this species in the Ebo Forest of Cameroon. San Diego Zoo Global has strict biosecurity measures in place to protect all of the wildlife in its care and has successfully protected its wildlife populations from emerging disease threats in the community such as Newcastle's Disease and West Nile virus. In March 2020, as the community responded to the pandemic, San Diego Zoo Global scientists worked with disease experts to share their expertise in biosecurity with USDA, AZA [Association of Zoos and Aquariums], and other organizations, establishing industry practices for protecting wildlife worldwide.

The San Diego Zoo Safari Park, like many public facilities, has been closed to the public since December 6 [2020]. The primate habitat at the San Diego Zoo Safari Park allows the great apes to be a safe distance from all guests at all times and pose no public health risk.

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[Since the beginning of the pandemic there has been concern for the potential threat to the conservation of non-human primates posed by likely SARS-CoV-2 infections. There has also been interest to identify species that could be appropriate animal models for biomedical studies of COVID-19. In experimental studies it was found that Old World monkeys (_Macaca_ spp. and _Chlorocebus_ spp.) are more susceptible than a New World monkey (_Callithrix jacchus_).

An analysis of the ACE2 receptor structure of several non-human primate species (https://www.biorxiv.org/content/10.1101/2020.04.09.034967v1) found that all apes (chimpanzees, bonobos, gorillas and orangutans), and all African and Asian monkeys (catarrhines), exhibit the same set of 12 key amino acid residues as human ACE2. Monkeys in the Americas differ at significant contact residues, explaining why experimental infection of _C. jacchus_ was not successful.

This is the 1st report of a great ape naturally infected by SARS-CoV-2. Urgent actions should be undertaken to limit the exposure of great apes and catarrhines to humans.- Mod.PMB

HealthMap/ProMED map of California, United States: https://promedmail.org/promed-post?place=8095510,68046

See Also

COVID-19 update (07): animal, China, origin, WHO experts mission

2020

COVID-19 update (557): animal, Slovenia (SA) ferret, OIE 20201226.8048809

COVID-19 update (552): USA, animal, cat, dog, snow leopard, OIE 20201223.8042405

COVID-19 update (551): animal, pig, research, experimental infection 20201223.8041877

COVID-19 update (536): animal, USA (UT) wild mink, 1st case 20201213.8015608

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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