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CORONAVIRUS DISEASE 2019 UPDATE (130): USA (NEW YORK) ANIMAL, ZOO, TIGER, LION, NEW CASES

A ProMED-mail post

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Date: Wed 22 Apr 2020

Source: National Geographic [edited]

<https://www.nationalgeographic.com/animals/2020/04/tiger-coronavirus-covid19-positive-test-bronx-zoo/>

Four more tigers and 3 lions at the Bronx Zoo in New York City have tested positive for the virus that causes COVID-19, the zoo announced Wednesday afternoon [22 Apr 2020], following a National Geographic inquiry. This comes nearly 3 weeks after one tiger at the zoo was confirmed to have the virus and 6 other cats were said to be exhibiting symptoms.

The diagnosis of the tiger, named Nadia, represented "the 1st time, to our knowledge, that a [wild] animal has gotten sick from COVID-19 from a person," Paul Calle, chief veterinarian for the Bronx Zoo, said 5 Apr 2020. The big cats likely contracted the coronavirus from an infected but asymptomatic zookeeper whose identity is unknown, Calle says: "It's the only thing that makes sense."

The zoo has been closed to visitors since 16 Mar 2020. Initially it did not plan to test the other cats showing symptoms, because doing so would require sedation, which can be dangerous. But the US Department of Agriculture (USDA) subsequently updated an online database with information that a lion in New York had also been confirmed as testing positive for the virus on 15 Apr 2020. National Geographic contacted the Bronx Zoo seeking more information on 22 Apr 2020. And shortly thereafter, the Wildlife Conservation Society, the nonprofit that runs the Bronx Zoo, issued a press release announcing that 4 additional tigers and 3 lions had tested positive. The zoo confirmed in the press release that the additional tests were done using fecal samples and did not require sedation.

It is not clear when the additional tests on the 3 lions and 4 tigers were conducted or when the zoo received the results; a zoo spokesperson did not respond to questions about the timing. The USDA did not respond to National Geographic's request for comment by press time.

Several domestic animals have tested positive for SARS-CoV-2, the virus that causes COVID-19, including 2 cats in New York State -- the 1st in the USA, the USDA announced today [22 Apr 2020]. A Pomeranian and a German shepherd in Hong Kong, as well as a domestic cat in Belgium, have also tested positive. The US Centers for Disease Control and Prevention (CDC) today [22

Apr 2020] issued new guidelines on the virus for pet owners, saying that while it does not recommend widespread testing at this time, it encourages cat owners to keep their cats indoors whenever possible.

Both wild and domestic cats had been known to [be] susceptible to feline coronavirus -- but until recently, it was unknown whether they could contract SARS-CoV-2. A new Chinese study has found that cats may be able to infect each other. Scientists now are rushing to learn what other species may be able to be infected by it.

After developing a dry cough in late March [2020], Nadia, a 4-year-old Malayan tiger, was tested for the virus on 2 Apr 2020, according to Calle. At that time Nadia's sister, 2 Siberian tigers, and 3 African lions also had coughs and a loss of appetite. When Nadia started showing symptoms, the veterinary team did a number of diagnostic tests and blood work. "Considering what's going on in New York City, we of course did the COVID testing," Calle said. The team took samples at the zoo, after sedating Nadia. They sent the samples for testing to the New York State Diagnostic Laboratory at Cornell University and the University of Illinois College of Veterinary Medicine Veterinary Diagnostic Laboratory. It is not the same type of test that healthcare providers give to people, Calle said, "so there is no competition for testing between these very different situations."

The zoo has all 8 cats -- one of which is not showing symptoms -- under veterinary care and expects them to recover, the Wildlife Conservation Society statement says. While it's becoming clear humans can pass the disease to some animals, there is currently no evidence that animals can spread the novel coronavirus to people, both the USDA and the CDC say. (It's believed the virus infecting humans likely developed from a very closely related coronavirus found in bats.)

Because this phenomenon is new, Calle said, there are many unanswered questions, including whether tigers and lions are more susceptible to coronavirus than other animals. None of the zoo's other big cats -- including snow leopards, cheetahs, a clouded leopard, an Amur leopard, and a puma -- are showing symptoms.

Zookeepers around the country have been making extra efforts to protect great apes in their care, as great apes can easily catch respiratory illnesses from humans. Experts have warned that they may be particularly susceptible to coronavirus.

The Bronx Zoo team has shared Nadia's diagnostic information widely with the zoo and scientific community, Calle says. "I suspect that there are other cases, and now that we're sharing this information, I have a hunch other likely cases will turn up."

Dan Ashe, president of the American Association of Zoos and Aquariums (AZA), commended Calle's team for their quick action to test Nadia. The AZA accredits more than 200 zoos in the USA, including the Bronx Zoo. Ashe said that the AZA has helped distribute USDA information that cautions about the potential virus transfer from humans to felids, and Bronx Zoo information about increased safety measures, including wearing masks and goggles to protect animals and keeping a distance of 6 feet whenever possible.

Ashe said that "If we'd known the keeper had COVID-19 they wouldn't have been at work." He said he believes human testing should be the priority because "if [the virus] can go from people to big cats, the most important thing we can do is test the people."

Although Ashe says he's confident that accredited AZA facilities will continue to actively monitor the threat, he's concerned for the big cats at the many substandard roadside zoos around the USA: "Anybody who has watched Tiger King, you think a facility like that would be able to respond in an appropriate way to information like this?" The majority of those zoos don't have veterinarians on staff, and it is unlikely tests would be done, Ashe said. And the cub-petting and close contact offered by these facilities "is troublesome in best of circumstances," he says, let alone at a time when the CDC and USDA are recommending maintaining distance among humans, and between humans and cats.

John Goodrich, chief scientist and tiger program director at Panthera, a global big cat conservation organization, is concerned for wild tiger populations. "Big cats like tigers and lions are already facing a litany of threats to their survival in the wild," Goodrich says. "If COVID-19 jumps to wild big cat populations and becomes a significant cause of mortality, the virus could develop into a very serious concern for the future of these species."

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[These new reports in tigers and lions and the cases and experimental results in cats alert us to the fact that felids (at least some species) can be infected by SARS-CoV-2 and even manifest clinical signs. The significance of this is yet to be established. It may become a concern for the conservation of wild populations of wild felids. In the meantime, cautionary measures should be taken so that domestic and wild animals are not exposed to potentially infected people. - Mod.PMB]

HealthMap/ProMED-mail map:

New York State, United States: <https://promedmail.org/promed-post?place=7266556,234>

See Also

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) 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

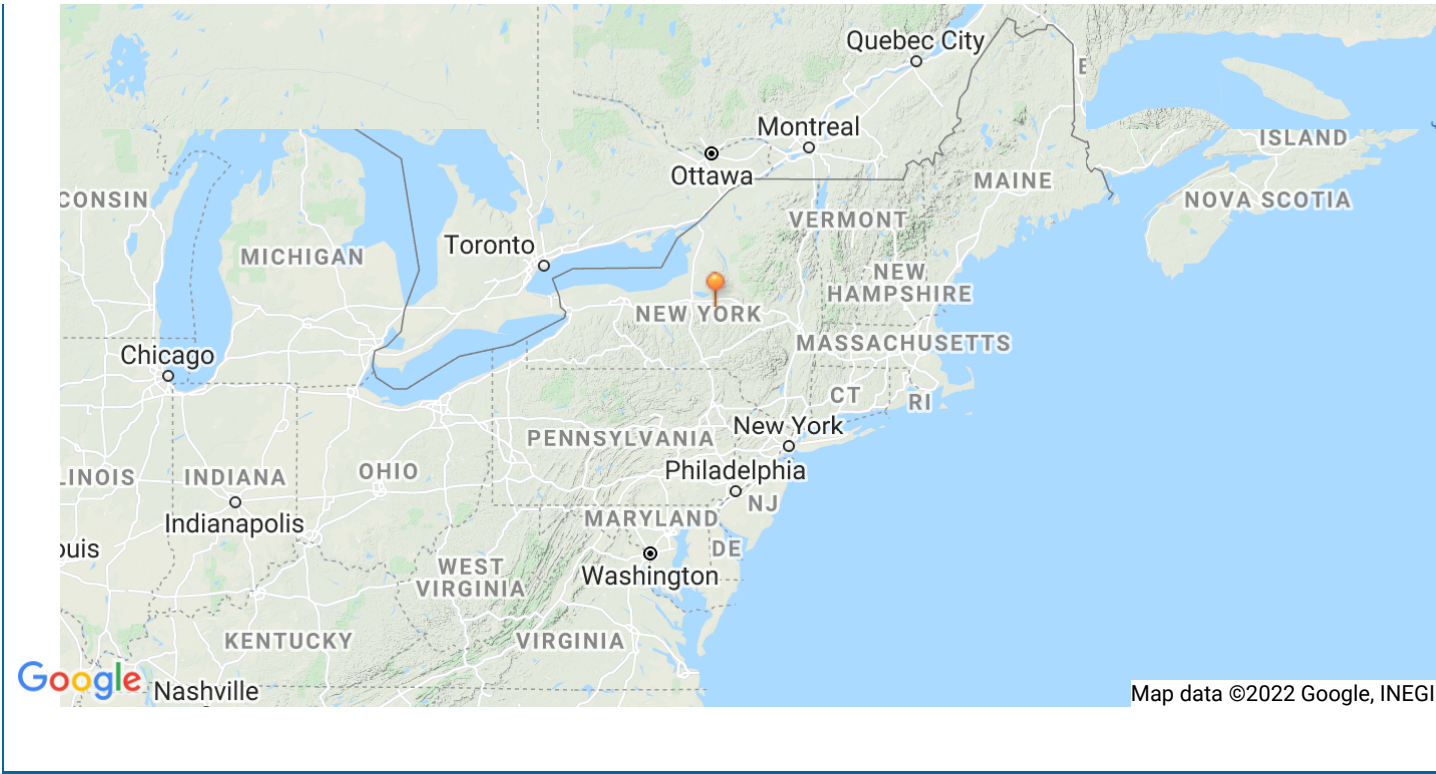
Novel coronavirus (01): China (HU) WHO, phylogenetic tree 20200112.6885385

Undiagnosed pneumonia - China (HU) (07): official confirmation of novel coronavirus 20200108.6878869

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