

Nota científica:

Record of canine distemper virus in an Andean bear, Colombia

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On January 27, 2018, the Corporación Autónoma Regional del Guavio (CORPOGUAVIO) received notice of a possible Andean bear (*Tremarctos ornatus*) attack on a pigsty in an urban area of the Arenal village of the Junín Municipality, Department of Cundinamarca, Colombia. Rural environmental promoters of the municipality requested help with this bear. When CORPOGUAVIO's technicians arrived, they found an adult male Andean bear preying on a pig.

The technicians attempted to scare off the animal; with fireworks and strident sounds, however, it was not intimidated and showed no fear of people, it returned repeatedly to the site, generating fear among the farmers. To prevent additional conflict, people of CORPOGUAVIO and Fundación Bioandina Colombia, captured the bear and remove it from the site to protect the life, health, and integrity of the farmers and the bear itself. Due to the unusual predatory behavior of this animal; and the risks to the community, it was moved to a rescue center.

The bear was given the name "Warii" and was found to be in poor health. On physical exam, he was in thin body condition (70 kg), had dull fur, and extensive dental wear and chipping of incisors, canines, and molars, indicating that he was very old. It was speculated that the poor body condition and tooth wear may have led "Warii" to attack and feed on the pig instead of hunting for more elusive prey species. Dental wear in this bear was similar to that found

by Castellanos *et al.* (2021) for a GPS radio-collared female bear in Patate, Ecuador.

On February 10, 2021, CORPOGUAVIO technicians and veterinarians from several institutions collected blood samples to evaluate health status and disease exposure. Among the routine analyses, a reverse transcription-polymerase chain reaction (RT-PCR) test detected the canine distemper virus (CDV) (CIDAGRO laboratories, Bogotá, Colombia). On recheck three months later, blood and urine RT-PCR and Antigen CDV-Ag rapid tests were negative for CVD.

Clinical distemper in Ursidae is rare, in zoo-housed Asiatic black bears (*Ursus tibethanus*) with confirmed CDV (Nago *et al.*, 2012), diarrhea was the main symptom. In giant panda (*Ailuropoda melanoleuca*), distemper infection was associated with teeth chattering, leg convulsions, mucopurulent ocular discharge, and nasal and footpad hyperkeratosis (Feng *et al.*, 2016). Furthermore, the mortality rate was high in pandas with CDV, with five of six infected individuals dying with severe pneumonia (Feng *et al.*, 2016).

Despite the infrequency of CDV clinical infections in bears, serology suggests that multiple bear species have exposure to this disease. Bear species with CDV titers include the American black bear (*Ursus americanus*; Bronson *et al.* 2014), Asiatic black bear (Nagao *et al.*, 2012), polar bear (*Ursus maritimus*; Kirk *et al.*, 2010), brown bear (*Ursus arctos*; Marsilio *et al.*, 1997), and the giant panda (Qin *et al.*, 2010).

This report confirms the first positive CDV case using an RT-PCR test for *Tremarctos ornatus*, previous research has also identified this virus in the Andean fox (*Lycalopex culpaeus*) in Ecuador (Castellanos *et al.*, 2020). It is currently unknown if "Warii" was infected while in human care or whether it was a healthy and asymptomatic carrier of the virus while in the wild, considering that the behavior and health of this bear showed normality while the infection was in progress and the virus was no-longer detected three months later.

It is therefore recommended to include serological analyses in routine wildlife examinations given the wide and extensive range of CDV hosts (Beineke *et al.*, 2015), because the disease has not been controlled or eradicated despite extensive vaccination campaigns (Beineke *et al.*, 2015). This first report of CDV in and Andean bear highlights the necessity to investigate the possible prevalence, risk and importance of infectious disease in fauna that shares habitat with this ursid in South America. We recommend that this testing be considered as part of the conservation plan (Dobson & Foufopoulos, 2001) for Andean bear.

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