

## **A Feline Leukemia Virus outbreak and other feline pathogens challenge the survival of Iberian lynxes (*lynx pardinus*)**

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The Iberian lynx (*lynx pardinus*) is considered the most endangered felid species in the world. Only about 200 individuals are left, living in 2 subpopulations in the South of Spain, in the Andalusian region. In the present study we systematically analyzed the prevalence and importance of feline pathogens in free-ranging Iberian lynx. From 2003 to 2007, blood, fecal and serum samples 77 free-ranging lynxes were tested for the presence of 7 viral (Feline Coronavirus, Feline Parvovirus, Feline Herpesvirus, Feline Calicivirus, Feline Immunodeficiency Virus, Feline Leukemia Virus and Canine Distemper Virus), a protozoal (*Cytauxzoon felis*) and 6 bacterial infections (*Bartonella henselae*, *Clamydophila felis*, *Anaplasma phagocytophilum* and three hemotropic mycoplasmas). Antibodies to FHV were detected in 12.2%, to FCV in 39.2%, to FPV 29.7%, to FCoV in 25.7%, to CDV in 16.2% and to *Anaplasma phagocytophilum* in 5.4% of the animals. Antibodies to FIV were not detected. In the PCR tests, all animals tested negative with the following exceptions: FPV (2.7%), *Cytauxzoon felis* (31.2%), *Mycoplasma haemofelis* (32.5%), 'Candidatus mycoplasma haemominutum' (35.1%), 'Candidatus mycoplasma turicensis' (13%), *Bartonella henselae* (21.3%) and CDV (1.3%). Fourteen lynxes were FeLV provirus-positive, eleven of which antigenaemic (FeLV p27 positive); all 14 animals tested negative for other feline viral infections including feline immunodeficiency virus and canine distemper virus. In 2007, six of the provirus positive, antigenaemic lynxes died. Time course, co-infections and outcome of the FeLV-infection suggest that the FeLV involved is of high virulence to Iberian lynxes, possibly a result from a combination of several factors, including the reduced number of specimens left. In order to prevent further spread of the virus, lynxes and domestic cats in and around Doñana should be vaccinated and domestic cats prevented from entering the area.