

## Beyond our borders: possible mpox reservoir host identified *Lesley van Helden*

In 2023, researchers in Côte d'Ivoire were monitoring a group of sooty mangabeys (Fig. 1). This was part of a long-term study monitoring the health of several species in the forest habitat of Tai National Park. In January 2023, a baby mangabey was seen to have red skin lesions that rapidly spread across its body, accompanied by lethargy and anorexia. It died two days later.

In the three months that followed, 26 mangabeys in the troop of 80 showed similar clinical signs, and three more infants died. Necropsies of the dead mangabeys led to detection of mpox viral DNA in major organs and further investigation confirmed its presence in faecal samples from 19 mangabeys in the troop during the outbreak.

Two complete viral genomes were sequenced from two of the affected mangabeys. The viruses were identical, indicating a single source of the outbreak.

As a result of the long-term nature of their work, the researchers had access to archived urine and faecal samples from the mangabey troop, as well as samples taken from dead wildlife found in the National Park.

Testing of faecal samples from the troop from the four months prior to the mpox outbreak revealed the asymptomatic infection of two individuals in early December 2022, including Bako, the mother of the baby that was the first to show clinical signs.

Rodents and shrews found dead in the Park between 2019 and 2024 were then tested, resulting in the detection of mpox virus in the carcass of a fire-footed rope squirrel (Fig. 2) found 3km away from the mangabey troop's territory a month before the first positive faecal sample. The viral genome obtained from the squirrel was identical to those found in the



**Figure 1: Sooty mangabeys (Photo: Justin Philbois)**



**Figure 2: Fire-footed rope squirrel (Photo: Oddfeel)**

mangabeys, indicating these squirrels as the potential source of infection.

Sooty mangabeys have been observed eating squirrels in the past, but to confirm this, the researchers tested the mangabey faecal samples for the presence of fire-footed rope squirrel DNA. Two faecal samples tested positive, one of which was the same sample from Bako that first tested positive for mpox virus.

The fire-footed rope squirrel is a common inhabitant of wooded areas in Central and West Africa, and its distribution overlaps with that of countries endemic for zoonotic mpox.

Despite these compelling findings, released recently as a [pre-print](#), further studies are necessary to confirm that the fire-footed rope squirrel is a reservoir of mpox. It must be shown that this species can be persistently infected and capable of shedding mpox virus while remaining largely asymptomatic. Without this evidence, it is possible that the squirrels are just another species capable of being infected by and transmitting mpox.

More information about mpox is available in the [May 2022 epi report](#).

# Outbreak events

**Rabies** was confirmed in six **Cape fur seals** in the province:

- ⇒ At the V&A Waterfront in **Cape Town**, an aggressive seal was seen swinging its head repetitively and having convulsions. It was caught and euthanased.
- ⇒ In Muizenberg, a sick pup was collected and died at a private veterinary clinic after showing neurological signs.
- ⇒ Members of the public reported an aggressive seal in Melkbosstrand. The seal was shot and the carcass was recovered later. Owing to the location of the shot and the time that elapsed between death and carcass recovery, only the brainstem was available for sampling.
- ⇒ In **Mossel Bay**, a seal was observed being aggressive and then comatose. It was caught and died en route to a private veterinary clinic.
- ⇒ A seal in **Hartenbos** with a head wound and showing aggressive behaviour was taken to a private veterinary clinic where it died overnight.
- ⇒ In **Plettenberg Bay** a large bull seal was seen displaying aggression towards other seals and boats. Earlier that day, a diver had reported being bitten by an aggressive bull seal and it is assumed that this was the same individual. The seal was shot and the carcass retrieved the following day.

Near **Vanrhynsdorp**, a **bat-eared fox** came onto a farm and started chasing the dogs. The farmer intervened and locked it in a courtyard before it could have contact with anyone. The local animal health technician shot and sampled the fox, which tested positive for **rabies**. Dogs on the farm and in the area were vaccinated in response.

Clinical signs of **bluetongue**, including fever, lameness and sores in the mouth, were seen in **sheep** on a farm near **Vanrhynsdorp** and three farms in the greater **Laingsburg** area.

A new outbreak of **African swine fever** started in the Du Noon area of **Cape Town**, where approximately 65 small-scale farmers keep livestock together in close proximity. There were previously outbreaks of African swine fever in this area in 2022 and 2023.

Antibodies due to possible previous H7 **low pathogenicity avian influenza** infections were detected in February on two **ostrich** farms in the **Albertinia** and **Mossel Bay** areas. These are assumed to be a similar virus to the LPAI H7N7 detected near Oudtshoorn in 2024, which was linked to 14 other H7 antibody detections.

An unvaccinated 6-month-old foal arrived in **George** from Gauteng for the purpose of a stop-over quarantine before entering the **African horse sickness** (AHS) control zones. The foal was tested a week prior to movement with AHS negative results. The foal appeared clinically normal for 12 days, then became depressed and died the next day. During necropsy, a pericardial effusion was seen and samples collected tested positive for African horse sickness virus.

During a visit to a beef **cattle** farm near **Hermon**, a private veterinarian noticed an aborted calf and suggested testing the herd for **brucellosis**. Twelve of the 73 cattle tested positive. The farm was placed under quarantine and follow up testing will be done on another farm from which cattle were recently bought, although these animals tested negative before moving.

Week-old **lambs** died near **Vanrhynsdorp** after showing severe swelling of the front knee joints and severe pain in the front legs. The suspected cause is **joint and navel ill**, i.e. bacterial omphalitis leading to arthritis.

**Sheep** inspected near **Caledon** showed signs of itching and wool breakage without skin lesions. The sheep tested negative for sheep scab, but small pale brown **lice** could be seen in their wool. The sheep were sheared and dipped.

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