

Rabies in the Western Cape: seals, dogs and jackals

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This month, several cases of rabies were reported in the Western Cape (Fig. 4). Most notably, an outbreak was detected in Cape fur seals (Fig. 1), a species in which rabies had not been recorded previously .

On 20 May 2024, a three-year-old pitbull in Capri, Cape Town, was presented to a private vet with a fever and a history of fighting with another dog in the house. The next day it was brought back to the veterinary clinic after spending the night attacking the furniture of the house. It was extremely aggressive on arrival at the clinic and was euthanased on suspicion of rabies. The laboratory results came back positive on 28 May and an investigation immediately took place, involving the state veterinarian and the Department of Health. There were three other dogs in the household without records of previous vaccination against rabies. All were euthanased.

The owner of the pitbull suspected that her dog had been bitten by a seal while walking on the beach. Though she had not witnessed this happening, she reported that her dog had developed a habit of harassing seals and had returned to her during a walk on the beach with a bite wound.

Shortly afterwards, there were reports of a seal being involved in a fight with dogs at Big Bay on 22 May and an aggressive seal biting surfers at Muizenberg beach on 26 May. Veterinary Services requested rabies testing for these cases and other recent suspect seal cases. Fresh brain samples could be obtained for the seal from Big Bay and it tested positive for rabies on fluorescent antibody testing at ARC-Onderstepoort Veterinary Research. Only formalinised brain samples were available for the seal from Muizenberg and another seal



Figure 1: Cape fur seal (Photo: Sea Search)

found on Strand beach on 15 May. These were therefore tested using immunohistochemistry at the University of Pretoria's Faculty of Veterinary Science. Both tested positive for rabies.

After the initial findings, the scope of the investigation into rabies in seals was widened. A research organisation, Sea Search, had been storing samples from seal mortalities since 2021, including brains in formalin. The decision was taken to test these samples, starting with those with a history of aggression. Of these, immunohistochemistry was positive for rabies in seals from Fish Hoek (October 2023) and Pringle Bay (February 2024), though another twelve brain samples were negative.

Frozen brain samples were available for a seal from Melkbosstrand (August 2023) and Plettenberg Bay (January 2024). Another seal showing abnormal behaviour was reported from Die Dam near Gansbaai in June 2024. All three of these samples tested positive for rabies on fluorescent antibody testing at ARC-Onderstepoort Veterinary Research.

As several of these seals displayed aggressive behaviour and were involved in biting people and animals, efforts are being made by the Department of Health, Veterinary Services and several NGOs to trace all the people and animals who have been in contact with suspect rabid seals in the last six months, so that they can receive medical or veterinary attention as soon as possible. Anyone who has had contact with a suspected rabid animal should visit their health practitioner as soon as possible for an assessment, while



Figure 2: Cape Fur Seals are a social species and can live in large breeding colonies. (Photo: Sea Search)

contact animals should be reported to the state veterinarian.

Cape fur seals occur along the coast of Africa between Southern Angola and Algoa Bay, Eastern Cape. They are a social species and, when on land, usually live close together in colonies (Fig. 2). They are known to approach people and other animals in certain circumstances, either out of curiosity or if motivated by food. Seals may interact with domestic animals in the same areas where they come into contact with humans e.g. with domestic dogs on beaches, or with other wild animals living at the coast. Jackals, for example, have been observed preying on seal pups along the West Coast (Fig. 3). Cape fur seals can travel extensively in the ocean in search of food or new territory, swimming hundreds of kilometers in a matter of days.

The origin of the rabies outbreak in seals is not currently known. Sequencing of the viruses found in the seal samples is underway and will hopefully provide more information about the epidemiology of rabies in this species.

Not only coastal areas in the Western Cape have been affected by rabies in May. On 14 May, a rabid black-



Figure 3: Predation by a black-backed jackal on a seal pup in Namibia (Photo: Sea Search)

backed jackal appeared in the town of Murraysburg in the central Karoo and attacked a dog (Fig. 5). The dog was unvaccinated and a court order had to be issued before it could be confiscated and euthanased on 23 May. When the dog was confiscated, it was observed to be salivating profusely (Fig. 6) and it subsequently tested

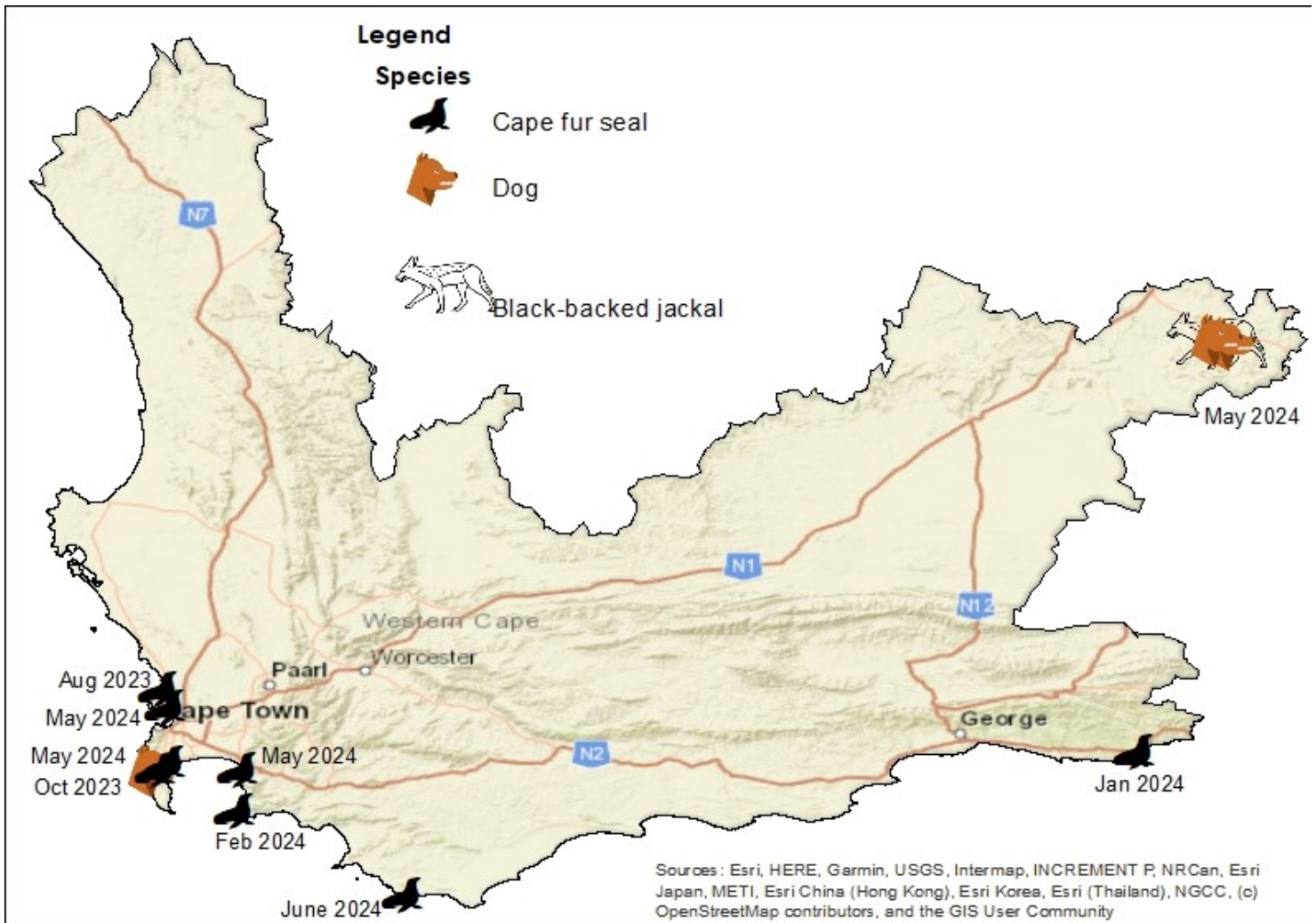


Figure 4: Historical and current rabies cases reported in the Western Cape in May and June 2024. Icons showing cases are labelled with the month in which the case(s) occurred.

positive for rabies. Then, on 28 May, on a farm near Murraysburg, a stray dog came into a farmhouse and was shot by the farmer. This dog also tested positive for rabies.

These cases illustrate that rabies should be considered a risk to people and animals in all parts of the Western Cape. All domestic dogs and cats must, by law, be vaccinated against rabies at three months of age, again within a year and every three years thereafter. Vaccination against rabies is recommended annually in high risk areas or if indicated by the vaccine manufacturer.



Figures 5 and 6: A dog was bitten (left) by a rabid jackal on 14 May. Nine days later, the dog began showing clinical signs of rabies, including hypersalivation (right). (Photos: L. Kruger and A. Barnard)

New publication

Prof. Celia Abolnik, Dr Laura Roberts et al. describe avian influenza viruses detected in South Africa in 2023, in a new article published by *Viruses*. Environmental samples taken by University of Pretoria staff and poultry veterinarians around the country revealed that H5Nx, H7Nx, H9Nx, H11Nx, H6N2, and H12N2 viruses were present in wild water fowl, though H5Nx viruses predominated. Viruses detected during HPAI H5N1 outbreaks in poultry and wild birds (mostly seabirds) showed that only two of the fifteen sub-genotypes present in 2021/22 were detected in 2023. The SA15 sub-genotype caused poultry outbreaks in the Western Cape and KwaZulu-Natal, and there was no genetic evidence for spread between areas or provinces. Only two seabird infections were found to be caused by SA15 viruses and the rest were caused by SA13 viruses, which have been found only in seabirds, since 2021. Read the full article here: <https://doi.org/10.3390/v16060896>

Outbreak events

A **ram** on a farm near **Ladismith** was observed to be losing weight and was unresponsive to treatment. A private veterinarian performed a necropsy and **Johne's disease** was diagnosed using histopathology. The farm was placed under quarantine.

Salmonella Enteritidis was cultured from routine cloacal swabs taken from day-old broiler **chicks** on a farm in **Cape Town**.

Salmonella Enteritidis was cultured from a **Hartlaub's Gull** chick that had been brought to a seabird rehabilitation centre in **Cape Town**. The chick was euthanased after showing signs of weakness, lethargy and loss of balance. Gulls commonly consume food waste, which is a possible source of *Salmonella* infection.

Five dead **pigeons** were found in a garden in **Malmesbury**. Other reports of dead pigeons from the area were also received. A necropsy of the pigeons showed lymphocytic interstitial nephritis with associated pancreatic necrosis, consistent with **pigeon paramyxovirus**. Confirmatory PCR testing was not available at the time.

A farmer near **Riviersonderend** reported **bovine babesiosis** (redwater) in his cattle after moving them to a new camp. Clinical signs observed included anaemia, inappetence, high fever, abortions, and haemoglobinuria.

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Previous reports are available at <https://www.elsenburg.com/vetepi>

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