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Rabies outbreak in Gauteng Province

A total of **six wild animals** were confirmed to have been infected with rabies virus over a six-week period in June/ July. This comprises five black-backed jackals (*Canis mesomelas*) and a honey badger (*Mellivora capensis*), all located within the **Cradle of Humankind** area. This is a concern because outbreaks of rabies have spilled over from jackals in this area before. In 2016, an outbreak resulted in about 50 animal cases (mainly wildlife, but also livestock and some dogs).

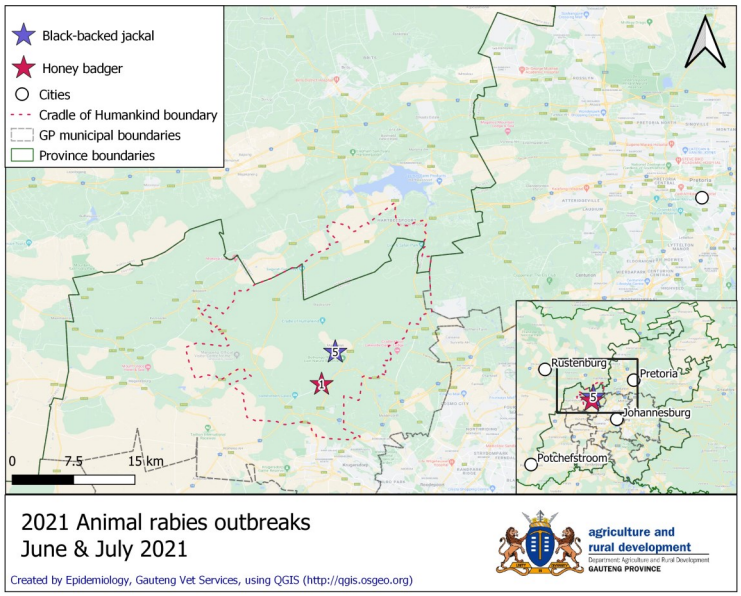
Initially, management at the reserve where the jackals were located was concerned about possible poisoning, because one jackal was behaving bizarrely. A decision was taken to shoot it and send it for a post -mortem examination, together with another dead jackal that was found nearby. When the post-mortems were negative for poisoning the brains were tested for rabies and the fluorescent antibody tests were positive. Both were young females (1.5 years and 2 years-old) and one reportedly had animal bite marks on the tail. After that, any fresh jackal carcasses were sent for rabies testing and a further three cases were identified in the following weeks.

There were no humans exposed to the jackals, which were in a private nature reserve. Unfortunately, **several people** and **one domestic dog** were exposed to the badger on 26 July about 4 km from where the jackals were found. The badger entered a plot and attacked a woman who was outside. It also bit a second woman who tried to help. The badger was so aggressive that it had to be killed to stop its unrelenting attack. The private veterinarian dealing with the dog that was also bitten advised that the badger be tested for rabies immediately. The disease was confirmed that same day and this informed the treatment of all those exposed.

The two women received Rabies Immunoglobulin (RIG) therapy and rabies vaccinations immediately. Sadly, one of them died a few days later of an underlying heart condition. A third woman was tracked down, who was bitten the previous day by an unidentified animal nearby the honey badger incident. She was found and given RIG therapy and rabies vaccinations. She is presently doing well. Three men, who killed the badger and handled the carcass, were also given rabies vaccination courses as post-exposure prophylaxis treatment. In the end, the dog was euthanased because the rabies vaccination record was inadequate.

Fig 2: The honey badger responsible for the attacks.
Photo taken by Kromdraai resident

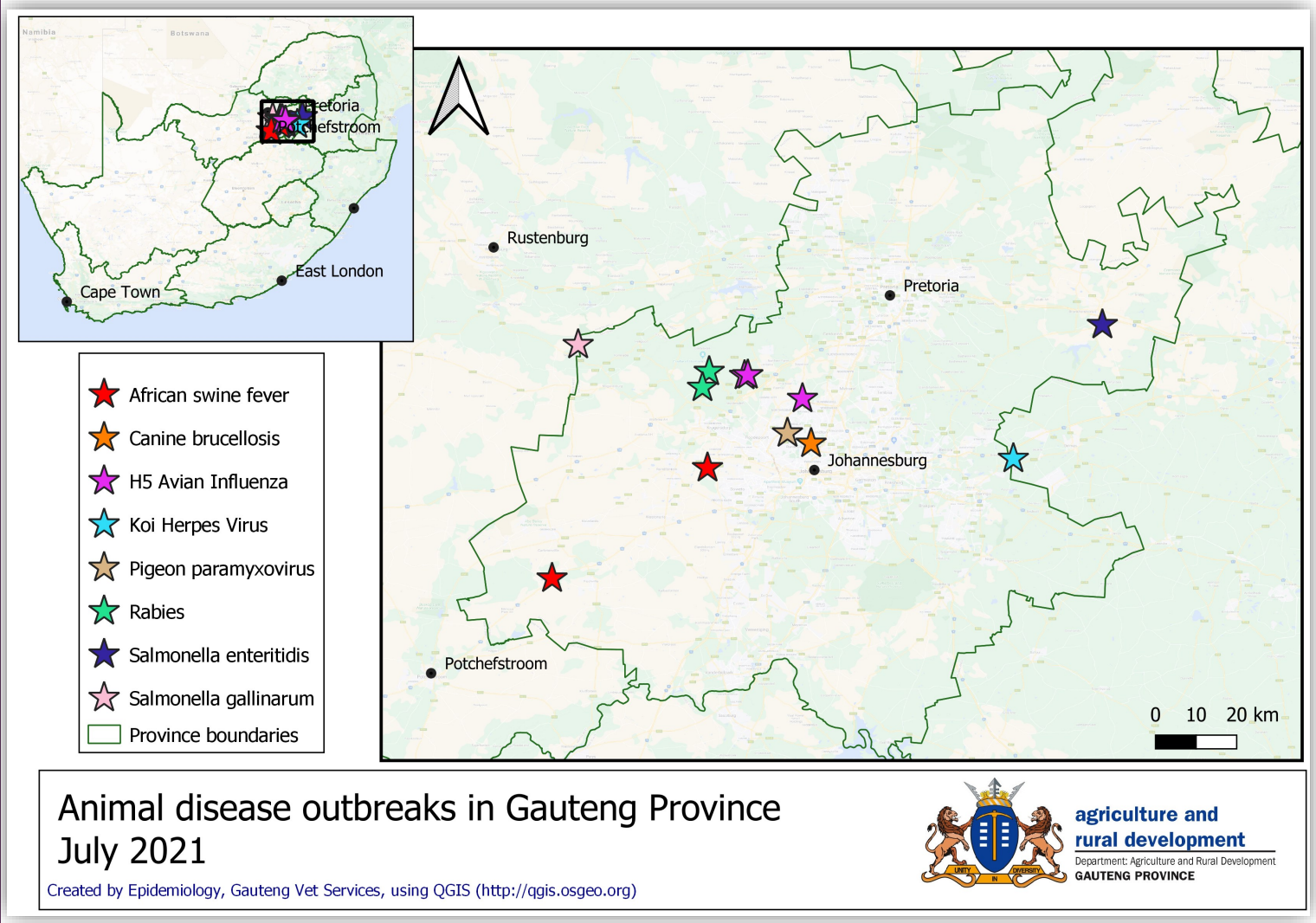
The Randfontein state veterinary officials responded by vaccinating dogs and cats on the plots surrounding reserves in the area in June (n=281). A total of 1191 and 372 pets were vaccinated in the West Rand in June and July respectively. Additional **vaccination and awareness campaigns** are planned for August. GVS works with Human Health colleagues to communicate and coordinate rabies control and response efforts. Officials are also working on implementing a program to vaccinate the local jackal population using rabies oral bait vaccine going forward. This has been done successfully in other countries.



Note: Outbreaks (stars on map) are labelled with the total number of cases reported at those locations

Fig 1: Distribution of confirmed animal rabies cases to date.

Fig 3: Dogs at the Kromdraai vaccination campaign.
Photo by Liesl De Boni



Animal disease outbreaks in Gauteng Province

* African swine fever (ASF)

Two new outbreaks were detected in Gauteng West, bringing the total ASF outbreaks for this year to 23. Both locations kept pigs informally, with makeshift housing and very poor hygiene/biosecurity levels. By the time the outbreaks were notified, most of the pigs had already died at both sites. The source of infection at the **Randfontein** site was not confirmed (no recent new introductions) but swill-feeding was standard and the place is adjacent to another June outbreak, with pigs not being well confined in this area generally. This owner also lost pigs to an ASF outbreak in 2019. Rumours were heard of an outbreak weeks before officials were able to locate it near **Carletonville** with the help of the SPCA. Further investigation revealed the outbreak was widespread. Apparently the first deaths started about 2 weeks after one owner bought pigs at an auction in Vanderbijlpark.

We appeal to pig keepers to assess and improve biosecurity practices at their premises. Keep pigs confined to the property; avoid feeding any swill or feed properly cooked swill; avoid buying new pigs with unknown health status; do not allow visitors to interact with your pigs; ensure that any workers/vehicles follow proper biosecurity protocols if they must enter the farm.

* Highly pathogenic avian influenza (HPAI) H5N1

Since the previous report, **three** outbreaks were notified on 29 June and 1 July. Two occurred on nearby plots in the **Muldersdrift** area. These were backyard chickens and special bird breeds for showing. None of the chickens survived on both premises although other species did and remained under quarantine as per the protocol. Another case was confirmed in a hand reared pelican that was part of a zoo collection in **Johannesburg**, after it died soon after being released into an enclosure. Biosecurity measures were intensified, and further sampling of bird droppings and other mortalities undertaken, but no additional cases were detected.

* Canine brucellosis

An 8-month-old, spayed bitch was diagnosed with ***Brucella canis*** at a private practice by positive urine culture. She had been treated for a chronic skin condition and then also developed disco-spondylitis. She was adopted from the Eastern Cape as a rescue and came to the **City of Johannesburg** in December 2020. The case was placed under quarantine and is being isolated while undergoing treatment.

* *Salmonella enteritidis*

An outbreak was detected at a broiler breeder rearing site in the **Bronkhorstspruit** area during routine surveillance for salmonellosis. There was no increase in mortalities or morbidity, with good hygiene and biosecurity practices in place. Laboratory testing determined that it was a field strain and not a vaccine strain. The source of introduction is not yet known, and all staff are being tested. The site will remain under quarantine until the treatment is completed and three consecutive weekly culture tests are negative. After lifting the quarantine, monitoring will continue at the destination site.

* Fowl typhoid

An outbreak of ***Salmonella gallinarum*** occurred at a commercial layer farm on the border of **Mogale City**. Increased mortalities were noted and post-mortems revealed the typical hepatic lesions; infection was confirmed by bacterial culture. The farm was placed under quarantine and biosecurity measures were intensified to prevent spread to the other sites of the farm. The affected house was managed with vaccination using the live vaccine, rather than antibiotic treatment. This should cause the illness to accelerate in infected birds and immunise those not yet affected. Two rounds of testing will be done after the second vaccination dose is completed.

* Koi herpes virus (KHV)

An outbreak of **KHV** was reported at a fish feed producer that keeps Chagoi koi carp (*Cyprinus carpio koi*) for feed trials, on the border of **Ekurhuleni**. A sudden increase in mortalities occurred 2 days after introducing a new batch to tanks already containing koi. Typical post-mortem findings and a positive PCR test by ARC-OVR confirmed the suspicion. All the remaining Chagoi koi were destroyed and disposed of, and the tanks, pumps and filters were disinfected before restocking. The lack of accredited & reliable confirmatory tests, failure to sample a statistically significant number to prove disease absence and that the koi tested are not usually subjected to environmental conditions that predispose virus shedding by carriers are the major reasons why KHV surveillance by producers and importers may be inadequate.

* Pigeon paramyxovirus (PPMV)

Increased numbers of deaths in doves and pigeons were reported by a bird-lover living in the **Randburg** area. Before dying the birds appeared lethargic, stopped eating, and then died suddenly. Specimens collected from two of these birds were positive for **pigeon paramyxovirus** by PCR test at ARC-OVR.

Fig 4: Rameron or African olive pigeon. An example of one of the birds that succumbed to PPMV.

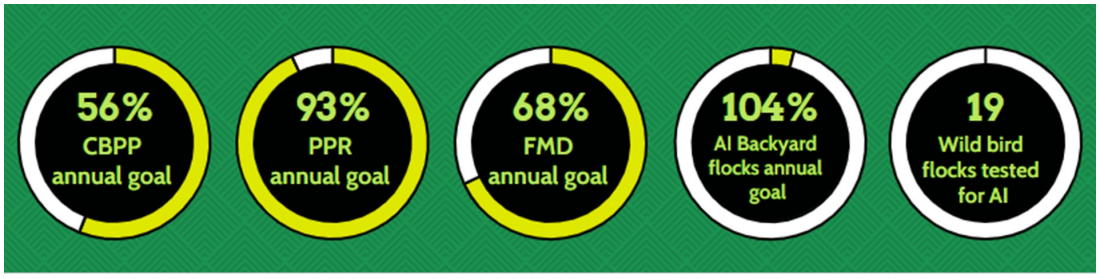
Photo by Richard Flack

Foot and mouth disease (FMD) in KwaZulu-Natal Province

There are now **26 locations** reported to be infected with FMD serotype SAT 2. They are located in two clusters involving dip tanks in communal areas (**Nongoma** and **Mtubatuba**) and two commercial feedlots. A Disease Management Area encompassing the surrounding districts has been declared, with no/restricted movement of cloven-hoofed animals and their products allowed. See DALRRD's latest report. All farmers, veterinary workers, abattoir staff & auctioneers must remain vigilant for FMD and report any concerns to their state veterinarian immediately.

Surveillance summary 2021

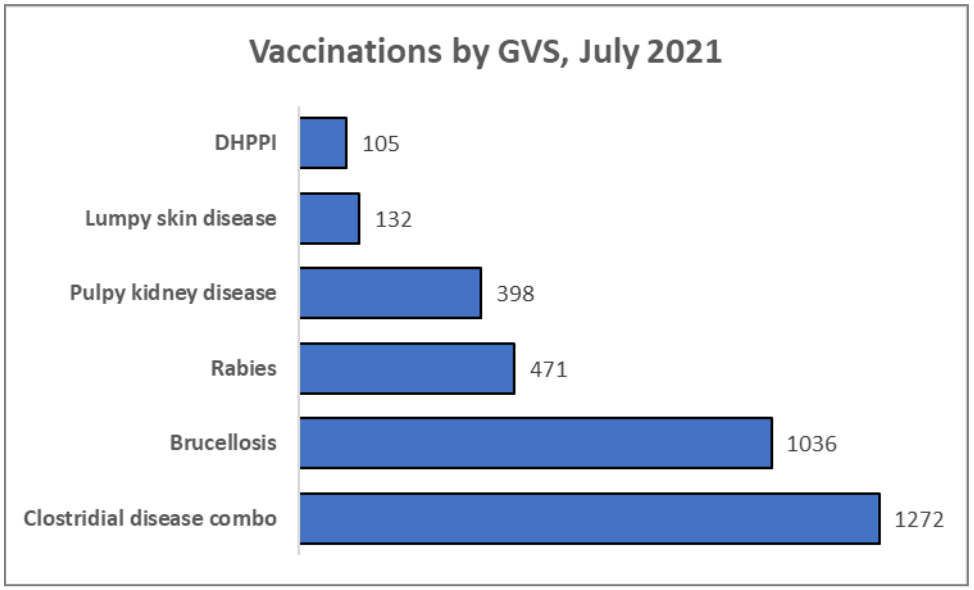
Active surveillance for contagious bovine pleuro-pneumonia (CBPP), peste des petits ruminants (PPR), foot and mouth disease (FMD), and avian influenza (AI) is done monthly or quarterly (FMD) in Gauteng. All suspected cases are investigated.

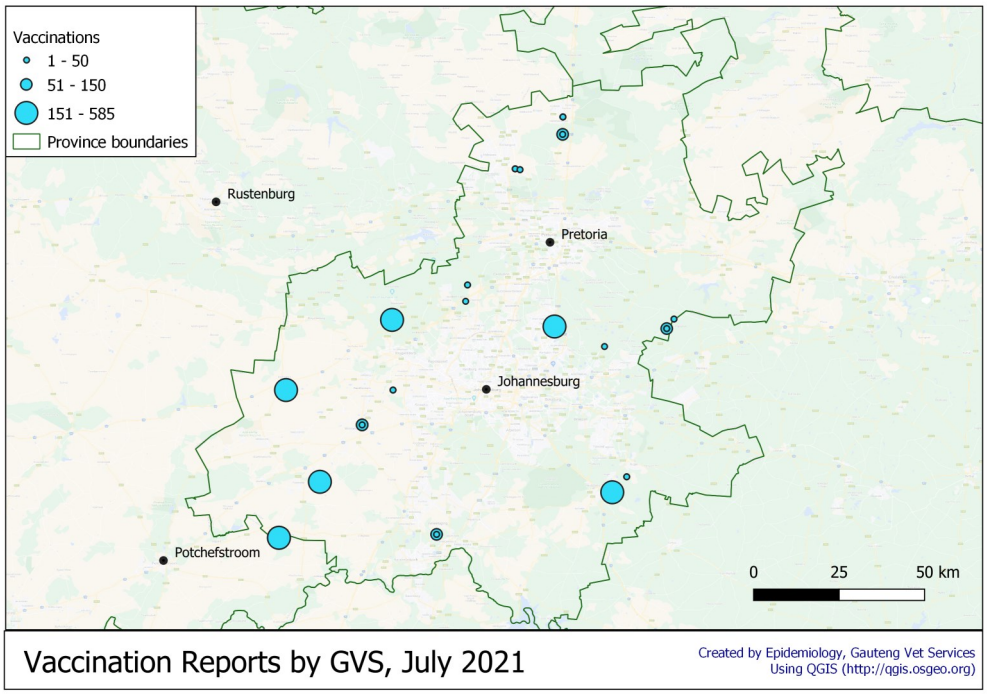


* Preliminary cumulative data

Animal disease vaccination activities

GVS primary animal health and regulatory officials administer vaccinations to animals in the public sector on a daily basis. In July, a total of **3 414** animals were vaccinated. This is much lower than usual as level 4 lockdown restrictions were in place for the whole month, and no vaccination campaigns could be held due to the associated crowding. Some data collection was also impeded because the department is between cellular service contracts.





Vaccination Reports by GVS, July 2021

Created by Epidemiology, Gauteng Vet Services
Using QGIS (http://qgis.osgeo.org)

DHPPI: Distemper, infectious hepatitis, parvovirus & parainfluenza virus.

Clostridial disease combo: Anthrax, botulism & black quarter.

Rabies Alert:

- There is an outbreak of rabies in wild animals in the West Rand area
- To report any animal suspected to have rabies, please contact your local state veterinarian **immediately**
- Promote rabies vaccinations of dogs
- If bitten/scratched by a possibly rabid animal, wash the wound for 10 minutes, even with plain running water, and then seek medical advice **immediately**

↓ **Are you coming to SASVEPM?** ↓

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