

Vector season is coming

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Sporadic outbreaks of bluetongue that have been reported in sheep in January and February this year are a reminder that, with the combination of rain and the relatively warm temperatures of late summer and autumn, vector-borne diseases are about to reach their peak (fig 1). It is therefore the time of year to be vigilant for both endemic vector-borne diseases, as well as those that are not common in the Western Cape, such as African horse sickness and Rift Valley fever.

Bluetongue is seasonal, occurring in late summer and autumn in countries where it is present. In the Western Cape it peaks in April as numbers of the *Culicoides* vectors are highest at this time. This corresponds with observations of vector surveillance at the Kenilworth quarantine station (see the Epi Report of October 2018).

A similar pattern is observed with African horse sickness (AHS), which stands to reason as it is also spread by *Culicoides* midges. However, the majority of reported AHS cases have been clinical and subclinical cases detected during active surveillance in the AHS surveillance and protection zones during outbreaks in 2011 and 2014. Low numbers of cases are usually reported from the infected zone of the province.

All reported cases of Rift Valley fever occurred during the epizootic of 2010 and 2011 but, again, cases peaked in late summer and autumn, probably due to the high numbers of mosquito vectors during this season.

Lumpy skin disease is also vector-borne and, according to conventional wisdom, cases should follow the same seasonal pattern as the aforementioned three diseases. However, it does not seem to do so in the Western Cape. The variation in numbers of outbreaks between years is large with, for instance, no cases being reported in 2018, while 49 outbreaks were reported in 2014. Interestingly, this is a similar pattern to what was observed by Ochwo et al (2018) in Uganda, a country with a completely different climate from the Western Cape.

Fortunately, bluetongue, AHS, Rift Valley fever and lumpy skin disease are all preventable with vaccination. Knowing that the risk of infection increases when vector numbers are high, we can plan to vaccinate in the low-risk seasons so that animals will be protected when they are most likely to be infected. For African horse sickness, this low-risk period is defined by law, with horse owners in the free, surveillance and protection zones only being allowed to vaccinate their horses between June and October.

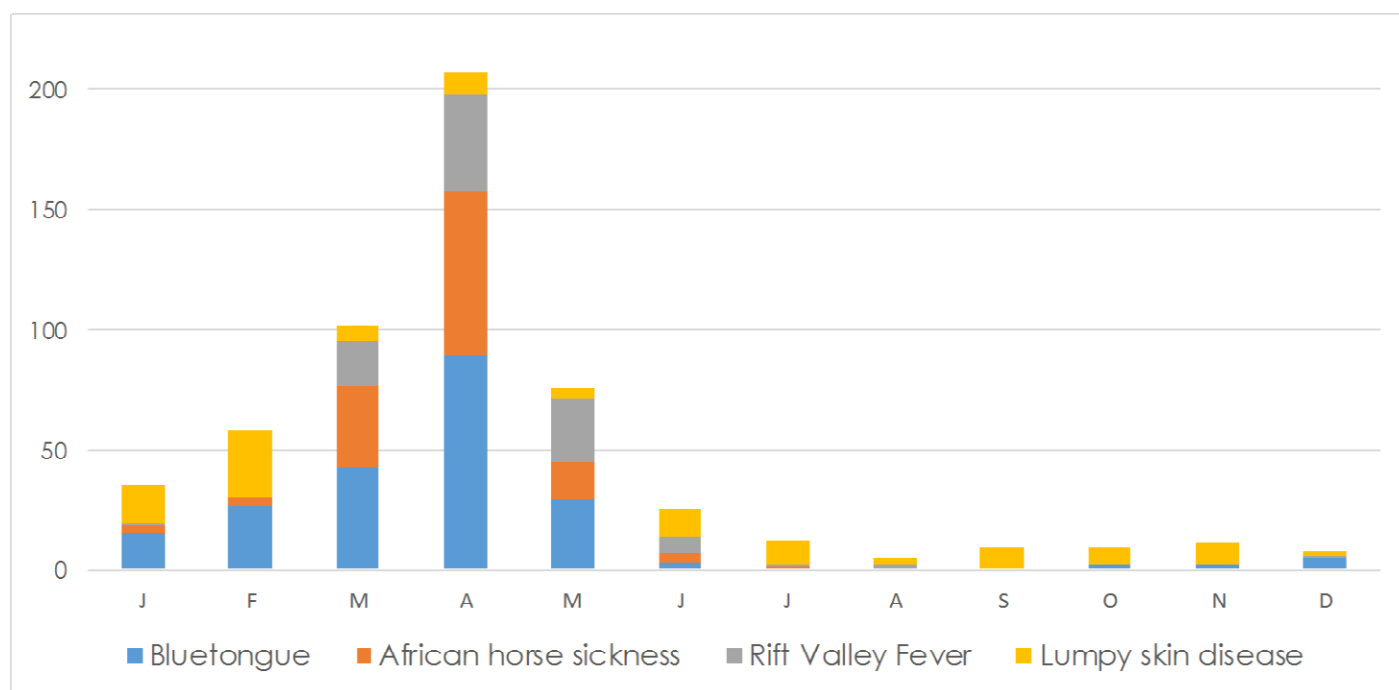
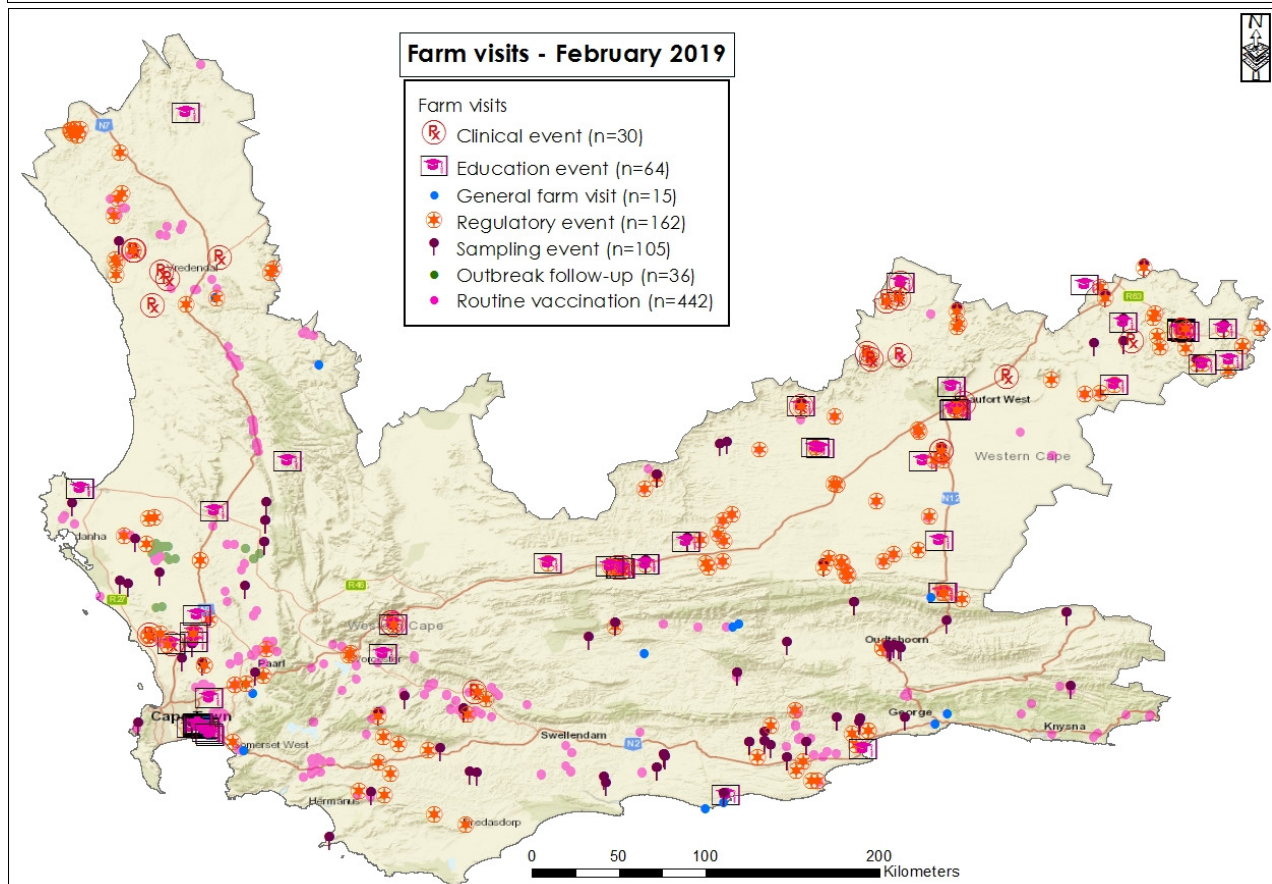
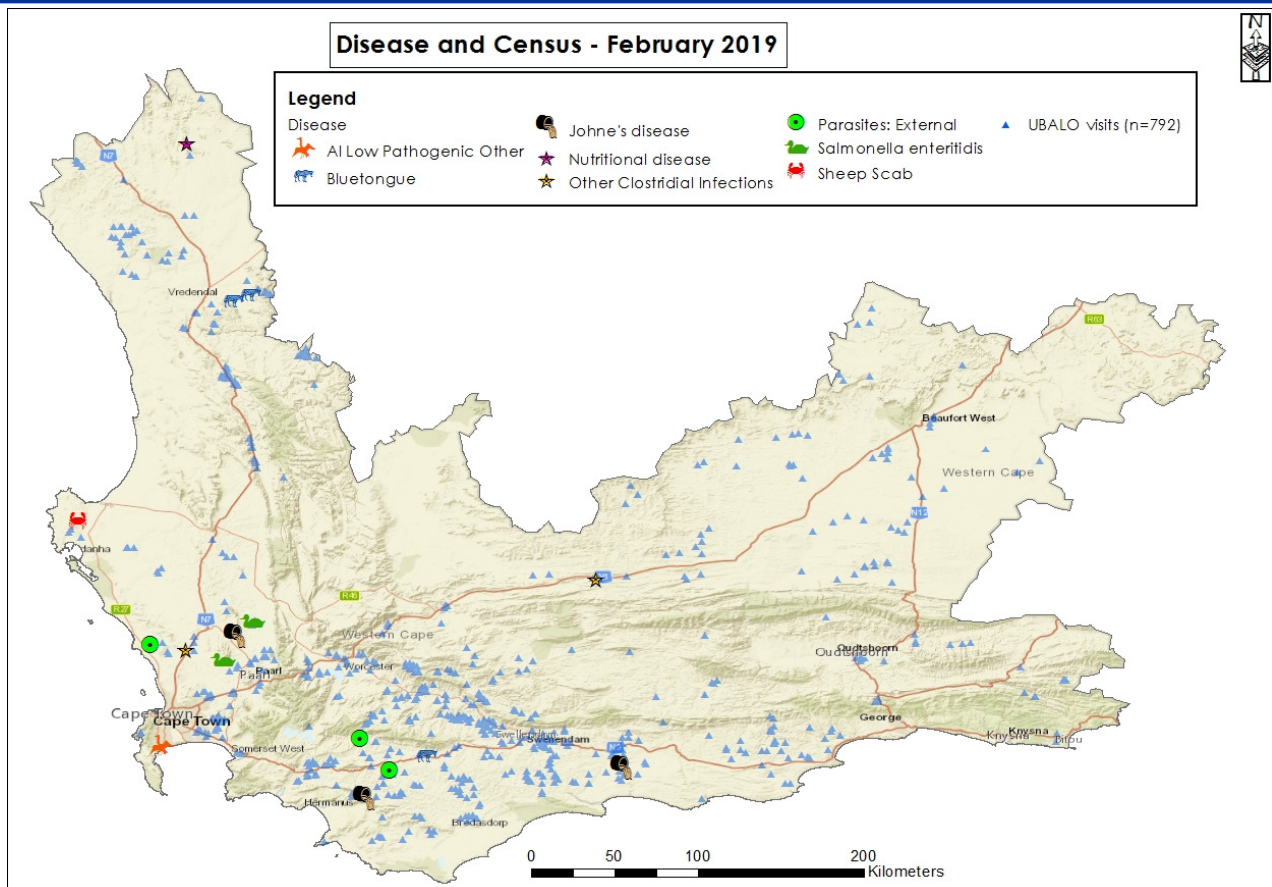


Figure 1: Outbreaks of vector-borne diseases reported in the Western Cape by month (2007-2018)

Disease and surveillance



Outbreak events

Wild **mallard ducks** are an introduced species that threaten indigenous duck populations by hybridising with them. The City of **Cape Town** therefore culls mallard ducks inhabiting public spaces. Several of these culled ducks from Zandvlei Nature Reserve were sampled for avian influenza surveillance and a **low pathogenic H11N9 avian influenza virus** was found in one of the samples.

An outbreak of **sheep scab** was detected in its early stages on a farm near **Vredenburg**. The farm experienced an outbreak of sheep scab last year, which was apparently successfully treated. This new outbreak was detected shortly after sheep were brought in from another property belonging to the farmer in the Northern Cape. The farm was placed under quarantine and the sheep will be treated under official supervision.

Farmers near **Malmesbury**, **Caledon** and **Heidelberg** noticed their **sheep** becoming emaciated and showing signs of diarrhoea. **Johne's disease** was diagnosed on these farms by private veterinarians.

Two broiler **chicken** hatcheries in the **Malmesbury** area received positive cultures for **Salmonella enteritidis** from dead-in-shell chicks and chick box liners. Increased monitoring and treatment of parent flocks was instituted.

Outbreaks of **bluetongue** were reported in:

- ⇒ Four out of 60 **sheep** in a flock near **Vanrhynsdorp**,
- ⇒ Two out of 140 **sheep** that died in a flock in **Caledon**. It is likely that these two sheep were accidentally omitted during vaccination.
- ⇒ Fifteen **springbok** of all ages near **Vanrhynsdorp** that died over two weeks showing clinical signs typical of bluetongue. When AHT Vanrhynsdorp was notified, only the springbok ram was showing clinical signs, but could not be caught to take samples. The ram has since recovered (and can still not be caught).

Two cases of **tetanus** in **sheep** were reported: one in a lamb near **Laingsburg** that died after castration using an elastrator, the other in a ewe near **Malmesbury** that presented with generalised muscle spasms and a penetrating wound of unknown origin in her cheek (fig 2).

Chickens with **infectious coryza** were successfully treated with sulfonamides near **Beaufort West**.

Red lice were seen on **sheep** inspected near **Riviersonderend**.

Mange was reported in **pigs** near **Caledon** (unconfirmed) and in two newly bought pigs out of 24 near **Atlantis** (fig 3).



Figure 2: Ewe with tetanus showing stiffness as a result of generalised muscle spasms (Photo: M Vrey)



Figure 3: Pigs showing clinical signs of mange (Photo: M Vrey)

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Disclaimer: This report is published on a monthly basis for the purpose of providing up-to-date information regarding epidemiology of animal diseases in the Western Cape Province. Much of the information is therefore preliminary and should not be cited/utilised for publication