Summer 2018: African swine fever virus hits north-western Europe

About 15 years ago, the Public Service of Wallonia and the Faculty of Veterinary Medicine of University of Liège set up a disease surveillance network for wildlife. During the spring of 2018, considering the westward saltatory progression of the virus from Georgia since 2007, the surveillance network delivered a series of conferences dedicated to African swine fever for hunters and forestry agents as a “priming” action expected to improve detection, in case. On Saturday, 8 September 2018, a hunteress, who had participated in the conferences, notified the discovery of three wild boar remains located close to each other in the Bois de Buzenol, a forest administratively attached to the municipality of Etalle in the south-east of Belgium, about 12 and 17 km, respectively, from the borders of France and Grand Duchy of Luxembourg (latitude: 49.6833°N and longitude: 5.6°E). These remains consisted of three vague aggregates of bones associated with a few fragments of dessicated skin. On Monday, 10 September, foresters dispatched to the scene did not find these remains, but soon discovered the foul smelling decaying body of an adult female wild boar. The forest officers immediately identified the key signs that they had been informed about at the conferences: “a group of dead and/or dying wild boars located close to each other,” this motivated them to transport the carcass to the Faculty of Veterinary Medicine at the University of Liège for autopsy and sampling. After carrying the corpse a few hundred metres, they fortuitously stumbled upon a
weak, staggering and ataxic young wild boar, which they euthanized and also transported to the laboratory.

On Tuesday, 11 September, the autopsy of the adult sow revealed equivocal lesions due to advanced decay of the viscera. Several large infarcts (1–3 cm in length) were, however, visible in the wall of the intestines. Furthermore, the autopsy of the young boar displayed lesions consistent with a diagnosis of African swine fever (multiple subcapsular and cortical haemorrhages of the kidneys and several lymph nodes). On Wednesday, September 12, spleen and kidney samples of both animals were received by the National Reference Laboratory (Sciensano, https://www.sciensano.be/en) and proved positive for the genome of the African swine fever virus by qPCR (Tignon et al., 2011). The two first cases were notified on Thursday, 13 September and sent to the European Reference Laboratory in Spain (Dr Marisa Arias, INIA-CISA, Madrid) for confirmation (obtained on Friday, 14 September). On the same day, a second team was dispatched to the Bois de Buzenol to search for and find the remains of the three wild boars notified first. This time, the search was successful and, on September 13, the rinsing fluids of the medullary cavity of the long bones proved similarly positive, increasing the number of infected animals found at the index location to 5.

Since then, a systematic search of the potentially infected zone of 63,000 hectares defined by the Public service of Wallonia and the Federal Agency for the Safety of the Food Chain and approved by the European Commission has been implemented. At the time of writing, this letter on 11 October, 139 wild boar carcasses have been detected in this area. A spleen sample was systematically collected before the bodies were incinerated. The genome of African swine fever virus was detected in 86, all of which came from a restricted geographical area extending over about 7,000 hectares (Figure 1). A search to collect as many wild boar remains as possible within the zone is increased every day in order to quickly circumscribe the geographical extent of the infected zone.

The scenario that led to the detection of ASFV in Etalle suggests that informing and training both foresters and hunters about the disease has been a key action in motivating « abnormal-event-finders » to refer samples and location data to diagnostic systems.

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CONFLICT OF INTEREST

The authors declare that they are not in a position of conflict of interest with any aspect of the work presented.

Keywords

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