

LES SUIDÉS EN CONTEXTE RITUEL À L'ÉPOQUE CONTEMPORAINE

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Doing the “dirty work”: how hunters were enlisted
in sanitary rituals and wild boars destruction
to fight Belgium's ASF (African Swine Fever) outbreak

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Sanglier traversant la Semois à l'aube durant l'automne 2017. Crédit Photo: Quentin Lenel / *Wild boar crossing the Semois at dawn during the autumn of 2017.*
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Doing the “dirty work”: how hunters were enlisted in sanitary rituals and wild boars destruction to fight Belgium’s ASF (African Swine Fever) outbreak

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ABSTRACT

In the early autumn of 2018, a virus as contagious as it is deadly, carried by wild boars (*Sus scrofa* Linnaeus, 1758) with the probable involvement of humans, crossed the Belgian border. African swine fever, which only affects suidae, is rapidly spreading in the forests of Gauma. The boar, whose status has gradually shifted from a regional emblem to a symbol of hunting abuses, finds itself abruptly transformed into a sanitary threat needing to be eliminated. The wild swine can contaminate its domestic cousin, the farmed pig (*Sus domesticus* Erxleben, 1777). Therefore, the spread of the virus would jeopardise the fragile Belgian pig farming sector concentrated in the north of the country. This is the start of a crisis that will last for more than 24 months; the infected forest is zoned and then isolated for the purpose of sanitisation, while “biosecurity” and “white zone” become the only watchwords. Mass destruction measures for wild boars are imposed by the administration and its experts through new so-called “sanitary rituals”. To achieve a rapid “return to normal”, hunters – mostly local ones – are enlisted in the name of their hunting skills, which, although they are usually contested by a part of Belgian society and media, are considered essential in this case. This event brings us to an exploration of the practices actors are attached to and forced to renounce to in the name of good crisis management. On-the-ground realities as related by field men bear witness to the unease felt in the face of the “dirty work” asked of them, while the upheaval of co-existence reveals ethical, tradition- and identity-related questions already existing before the crisis.

KEY WORDS

Health crisis,
hunting,
culling,
biosecurity.

RÉSUMÉ

Faire le « sale boulot » : comment les chasseurs ont été enrôlés dans des rituels sanitaires et la destruction des sangliers pour lutter contre une épizootie de PPA (Peste porcine africaine) en Belgique.

Au début de l'automne 2018, un virus aussi contagieux que mortel s'invite sur le territoire belge, transporté par des sangliers (*Sus scrofa* Linnaeus, 1758) avec la probable complicité des humains. La peste porcine africaine, qui ne touche que les suidés, se répand rapidement dans les forêts gaumaises. Le sanglier, dont la trajectoire bifurque peu à peu d'emblème provincial à symbole des dérives de la chasse du fait de sa surdensité sur tout le territoire, se retrouve abruptement propulsé en menace sanitaire à abattre. Il peut contaminer son cousin domestique, le cochon d'élevage (*Sus domesticus* Erxleben, 1777), et par conséquent, si le virus venait à se disperser, mettre à mal le fragile secteur de l'élevage porcin belge concentré au nord du pays. C'est le début d'une crise qui va durer plus de 24 mois; la forêt infectée est délimitée par zones puis confinée dans le but d'être nettoyée. Les mots d'ordre deviennent « biosécurité » et « vide sanitaire ». Des mesures de destruction massive des sangliers sont imposées par l'administration et ses experts via des nouveaux rituels dits « sanitaires ». Pour atteindre un rapide retour à la normale, des chasseurs, pour la plupart locaux, sont enrôlés au nom de leurs compétences cynégétiques, considérées ici comme indispensables. Pourtant, depuis longtemps, elles sont contestées par les autres acteurs de la gestion de l'environnement, tout comme par une partie de la société et des médias. Cet événement nous engage à explorer les pratiques cynégétiques auxquelles les acteurs sont attachés mais doivent renoncer au nom de la « bonne » gestion de cette crise. Les récits des protagonistes de terrain témoignent du malaise face au « sale boulot » qui leur est demandé, tandis que le bouleversement des coexistences révèle des questions éthiques, coutumières et identitaires déjà sous-jacentes avant la crise.

KEY WORDS

Crise sanitaire,
chasse,
abattage,
biosécurité.

INTRODUCTION

“It’s absolutely crazy that we decide to exterminate a species. It’s something that’s never been done before. So, on the one hand, we have to join, to do our best to collect, to eliminate the wild boar. And then, on the other hand, we tell ourselves: ‘God damn it! We have to leave some, what are we doing?’ [...] And besides, we like them. But hunters, like I tell you, they are good little soldiers who have a certificate of good conduct, who have weapons, who have insurance, who have everything you want.” (Hunter from the Gaume region)

Until the autumn of 2018, coming across a wild boar (*Sus scrofa* Linnaeus, 1758) in the forests of Gaume was not a particularly worrying event for the many people who frequent it in a professional context or for leisure. These Suidae, which widely appear in representations of the local wildlife, live there in high density and are particularly visible through their traces – mud puddles, overturned earth, and grubbing. The wild boar has long been considered an emblem and a part of local heritage. The animal is visible symbolically from the Ardenne to Gaume. It appears on coats of arms and the authorities of the Province of Luxembourg chose it as their emblem to symbolise the ardour and tenacity of Belgian Luxembourgers.

However, at the beginning of 2021, within a large zone in crisis, there is practically no wild boar left... Some of them succumb to the virus of the African swine fever, but the vast majority of them are voluntarily killed in the fight against the spread of the disease, which began in the autumn of 2018. Accounts of the crisis and its management reveal the brutal

impact of radical measures on the area, which are taken by the authorities in the name of health values and the common good. If the virus found a gateway into the territory with wild boar, its means of transmission quickly reveals how porous the line separating boars from their domestic cousins (*Sus domesticus* Erxleben, 1777) is, since both of them are deadly infected by the virus. Therefore, while wild boars are present in high density on the concerned territory, it is the important economic stakes based on the good health of their domestic cousins living in the north of the country which impose a radical sanitary logic, centered on deliberately provoking death in order to empty the infected area. With the view to finding a healthy forest again, the surviving animals are hunted down and slaughtered¹, all the carcasses collected, analysed and then destroyed. Their places of death but also of life, cleaned and disinfected. Faced with the magnitude of such a task, and in the absence of a specialised public service, local hunters² are enlisted, along with administrative officers, to carry out the enterprise of destruction.

In this article, we discuss the response to the outbreak of the African swine fever virus on Gaume territory from the angle of the so-called “destruction” sanitary rituals in which hunters and wild boars are involved. These rituals are defined by scientific experts and the administration as “a code, a user manual on how to act with others, and also with oneself” (Segalen 2017)

1. The word used to speak about the killing of Suidae through this work varies and comes from the actors themselves. By using the same terms as them, we wanted to preserve the diversity that appears in their choice of words, which reflects the diversity of relationships.

2. In this paper, we use the term “local hunters” or “Gaumais hunters” to designate actors who come from the territory and/or have been frequented the territory for a long time due to their professional or leisure practices.

in a logic guided by health priority and economic purposes. A form of "living with" the disease is politically and economically impracticable, the health risk reduction and the return to normalcy are the only issues at stake. Health management measures do not allow for a shared existence with the virus and imply enlisting hunters alongside other environmental managers in an unbridled effort to eradicate the *Suidae*. The skills of killing hunters are then put to use in the destruction project, without considering the gap between hunting and destruction practices.

For Fabre-Vassas, who studied hunting rites (Fabre-Vassas 1982), the practice of hunting is characterised by "the sequence of moments when this system orders and prioritises the ways of hunting, imposes what must be done and authorises acts and sayings which the group admits are meaningful because they conform to the implicit logic of meaning which governs this time of social existence"³. In the fight against the virus, the sanitary concepts proposed by experts impose what has to be done, where and when it has to be done, in what order. Here, we are going to show that the sanitary rites of African swine fever (ASF) management involve new killing collectives while annihilating pre-existing forms of social existence which are specific to hunting practices in particular. Far from the relational thinking constituting the rituals that organised hunting practices on the territory, a new so-called "sanitary" authority imposed itself as the owner of the definition of the common good and the only valid plan of action – eradication –, its meaning, its best practices and its codes (Fabre 1987). Public authorities propose a new form of social continuity based on the objective of eradication that each actor involved in tends to appropriate, not without suffering and difficulties.

While at the same time hunters are criticised in society, we show how the health project therefore tries to borrow from ritual its strength in "establishing or maintaining boundaries of a group, conferring status on the individual within that group, resolving conflict, and provoking catharsis" (Houseman 2002). The particular "sacrificial rationality" of the technique of slaughtering (Keck 2020) is not part of the universe of meaning of the collectives involved in the culling. But because they take part in this "management of misfortune" (Keck 2020), they have to adopt that specific form of rationality in order to make it obvious and acceptable in their own view and not question the disease control methods resulting from a powerful alliance between the administrative, political and expert worlds.

In the first part of this article, we describe the hunting practices at work in Belgium before the onset of the crisis. We show that they set a variety of actors in motion, that they are multiple, complex and as little known as they are controversial. With this in mind, we highlight the central role played by the wild boar in these hunting practices. Secondly, we describe the arrival of the virus, the risks it represents and the decisions taken by the administration in terms of crisis management in the name of economic interests on a national

scale. We then explain how the measures have been carried out locally and the establishment of ritualised destruction has been put in place by the administration. While they are singled out as responsible for the crisis, the local hunters have been enlisted, alongside administration agents and at a rate that is difficult to sustain, in the systematic eradication of wild boars. Finally, we try to reveal the enlisted hunters' lived experiences, their relationship to these animals "to be destroyed", as well as the compromises and dilemmas that this "dirty work" poses to them. We conclude that the destruction of animals, while it involves hunters among other actors, has little to do with hunting. This gives us the opportunity to finally take a step back to underline the brutality – towards humans and obviously towards animals – politically and scientifically accepted and mediatically trivialised of this unbridled animal eradication. All this takes place in a society that questions the usefulness of hunting and its possible professionalisation, saying that it is also concerned about the safety of all living beings and the good management of them.

Our investigation begins as soon as the virus arrived in Belgium, in September 2018, and continues in 2021, as the territory has just regained its European (AFSCA 2020a) and then worldwide (AFSCA 2020b) ASF free status. Our investigation takes place in three stages. In the first one, when the virus has barely been detected, we follow and accumulate for three months the many media and official traces that reveal a major crisis in full explosion: the catastrophic speeches of the experts, the descriptions of the devastation caused by the virus on living organisms, the ordeal of the affected animals, the amount of carcasses, the first slaughtered animals, the debates around the presumed role of some hunters in the introduction of this plague and the enormous economic risks incurred. The second phase begins in February 2019, where we carry out a qualitative survey of the actors involved in the crisis and its management for five months. As part of the training of 12 final year Master students and with the help of three researchers, we carry out a first series of 20 interviews as well as several field trips, in particular in the company of hunters (Beco *et al.* 2019). On the basis of this exploratory phase, a four-year research project has been funded by the Belgian national scientific research fund (FNRS) since the end of 2019, in the framework of which the first author of this paper is writing a doctoral thesis. The field investigation continues there and focuses on the "humanimal" relationships at play in this crisis, its management and, today, its resolution. While the relationships depicted in this project also involve not only those linking breeders to their pigs but, more broadly, those between humans and non-humans, this article focuses on the relationships between hunters and wild boars.

The interviews were carried out with a formal but also a more informal approach, in the form of a crisis story or in-depth dialogues. The testimonies used throughout this article come from those in charge of managing the crisis and local hunters but also from scientists, farmers who euthanised their pigs during the crisis, agents of the Department for the Study of the Natural and Agricultural Environment (DEMNA) and the Department of Nature and Forests (DNF) of the affected

3. All the quotes originally in French contained in this article were translated by the authors.

cantonments, agents of non-governmental organisations, an agent of the Federal Agency for the Safety of the Food Chain (AFSCA) and veterinarians.

This contribution is intended first of all to be empirical in order to give a voice to some actors involved in destruction work: the hunters, strongly mobilised to carry out an enterprise of destruction supposedly in the continuity of their passion and simultaneously forced into silence. The voice of hunters would not have been listened to because of their weak legitimacy as managers of an environment that is moreover in crisis.

This article aims to be a description and an ethnographic treatment of the hunting environment, the arrival of the virus and the concrete acts of animal killing. Over the course of our investigation, they also turn out to be among the rare actors to express themselves as spokespeople for wild boars, capable of speaking both “of” and “for” (Despret & Porcher 2002) those living beings that crisis management annihilates as much as the disease itself. We follow the hypothesis that, for a teaching and instructive crisis and a form of territorial resilience, it is necessary to clarify and enhance the experiences of the actors involved in the field. Far from the general and “pure” ideas on health management, these actors bring management “down to earth” (Latour 2017), to the real management situations, and to what they bring to the table in both the short term and the long term.

HUNTING LANDSCAPE IN WALLONIA AND INTRODUCTION OF THE WILD BOAR: EXCESSES, CONTROVERSIES AND TENSE RELATIONS

“The wild boar... it’s the magic beast, it’s big, it’s black, it smells bad, it’s ugly, it’s nasty, it’s highly rewarding to attack a wild boar... The wild boar is the last wild beast I mean! It’s a dangerous, ferocious animal, it destroys crops, it goes everywhere, it is clever, it lives in groups, it spreads diseases and on top of that it is prolific. The boar is public enemy number one, it is the beast to destroy, just because it doesn’t look good! That’s why it has become the quintessential shooting beast.” (Hunter)

HUNTING PRACTICE IN BELGIUM

The wild boar, an opportunistic omnivore, with incredible plasticity in terms of habitat (Tack 2018), is a game species fully managed by the hunting world (Filot 2005). Its management and place in Wallonia are impossible to understand without addressing the hunting practices which give them existence, which instaur them (Souriau 2009). On Walloon territory, all legal big game⁴ hunting practices can be grouped into two main trends: collective hunts such as drives, and individual ones such as “still hunt” or “stalking” lead to very different encounters between humans and wild boars! The still hunt consists of let-

ting the game approach. It is practiced at dawn but also in the evening, until dusk. It can be done on the ground or hidden in a watchtower. Stalking or “pirsch” is practiced in the opposite dynamic: it is the hunter who advances towards the game at “good wind” and without being spotted. These two hunting practices are often preceded by long observation sessions. They require precise knowledge of the land and the game that is present there as well as its favorite places. Strongly anchored in the territory, these methods are mostly adopted by passionate hunters who spend a lot of time taming the woods. In all cases, the objective is to achieve a “clean” shot that has to be fatal on the spot, targeting the heart or the neck. It must be carried out without haste and nor obstacle, only on a clearly identified animal at a standstill. This approach allows selective shots which can be oriented by sanitary concern (elimination of weak, sick and inopportune individuals from a genetic point of view in order to improve the quality of the game) or of regulation (balancing of populations from the point of view of density or the sex ratio) but also in order to obtain trophies. While on still hunt or approaching, the hunters cannot shoot everything they want and must respect the cervid quotas enforced by the hunting committee of the territory and the administration. These modes of hunting are practiced throughout the hunting season and respecting the official opening dates of the game concerned.

Very different from stalking, the practice of hunt drive is a collective, noisy and convivial mode of hunting. The hunts are organised in the form of hunting days, several weekends per year and per territory. They can take different forms, with the possibility of using horns, shouts and hounds, or engaging in calmer thrusts without canine assistance. The drive takes place in an “enclosure” which is a territory delimited on a map and around which a firing line forms. This line is made up of a succession of numbered shooting stations (watchtowers or simple spots on the ground). At the start of the day, each hunter is assigned by drawing lots the number of the position they will occupy during the entire hunt. Inside the enclosure, we find another row made up of beaters or drivers, with or without their hounds. Together, they advance, maintaining their alignment and shouting in order to frighten the game so as to push it out of the enclosure and towards the firing lines where the hunters (called standers) try to shoot it down on the move. Less widespread, silent thrusts are a form of drive where the firing stations are every watchtower (shooting from a height allows bullets to be buried) distributed over all the enclosure and between which game is encouraged to circulate. They take place in peace and without hounds. Other variations of drive exist but these two always bring together beaters with or without hunting license only equipped with bladed weapons and hunters – passionate as well as occasional ones – shareholders or simple guests with firearms. The drives are collective episodes that unfold before and after the act of killing as such, both in practices and as social events. “The first thing I do in front of a hunter and the beast he has shot is that I congratulate him. I take his hand and say ‘Congratulations, well done’. It is understanding and participating, in your own way, in the pleasure or deed that the other has done” says one bloodhound handler.

4. Walloon big game includes Wild boar (*Sus scrofa* Linnaeus, 1758), Red deer (*Cervus elaphus* Linnaeus, 1758), Roe deer (*Capreolus capreolus* Linnaeus, 1758), Mediterranean mouflon [*Ovis gmelini musimon* (*Ovis musimon* Schreber, 1782) × *Ovis* sp. (*Ovis aries* Linnaeus, 1758)] and fallow deer (*Dama dama* Linnaeus, 1758) which is only found in Belgium in the forests of the region of Ciergnon.

Historically, drive hunting is more common in countries with a Latin tradition and is compared to "gathering" hunting. Still hunt or pirsch is more common in areas of German influence and is assimilated to "harvest" hunting (Hell 2012). In Wallonia, the two practices coexist but drive hunting is the principal hunting method, especially in the far south. Hunting methods are also linked to the types and sizes of the territories as well as to the specificity of the hunted game; "it is their habits that dictate the way they are hunted", explains a hunter. "We hunt the wild boar during the drive because it is a nocturnal animal, so during the day you don't see it, you have to go and find it in the thickets." However, the wild boar shows regular diurnal behavior when it benefits from optimal quiet conditions (Etienne 2015).

THE WILD BOAR – KING OF DRIVES AND CASH COW OF THE HUNTING BUSINESS?

"The wild boar is the king game of drive hunting and drive hunting is the most convivial hunting process! So a good wild boar hunt is relatively expensive [...] the wild boar represents in a way the stock in trade of collective hunts and, I would even say, with commercial tendencies." (Hunter working for the administration)

Beyond the positions defended and the practices favored by each hunter, the organisation of hunts today involves a whole series of practices that attract criticism from more and more actors towards the hunting world.

In Belgium, the right to hunt is linked to the right of property. Therefore, in order to hunt, it is necessary to obtain a permit from municipalities or private owners. The price of these permits is variable and landowners do not hesitate to sell rights to the highest bidder, thus bringing competition into play. To be able to obtain these payments, the leaseholder must surround himself with investors who pay annually to participate in hunting activities. As a consequence, hunters are inclined to pay sums that are proportionate to the reputation of the hunt in question. The prestige of a hunt is essentially derived from the regularity of the hunting bag, that is, the quantity of animals shot during the hunt. In order to be able to continue to organise the hunt or to cover expenses, the game manager must therefore develop a base of loyal investors. In this "optimal yield" dynamic, game animals become capital on legs and the hunting manager becomes an entrepreneur of the forest. "Today, when you think of hunters, you think of managing a hunt", says a hunter. The wild boar therefore becomes the stock in trade for this type of management because, among other game, it is the boar that best withstands hunting pressures while still maintaining a healthy rate of growth. "The guy who comes three times to your hunt and doesn't shoot anything, he won't come back. If you want to make a hunt profitable, you need investors who come back and who pay. Deer and roe deer are too complicated to raise. But wild boars are easy. I understand the system, but I don't approve it, but I understand it..." points out a forestry officer.



FIG. 1. — Picture of Mister Louis, forester in Herbeumont, feeding the wild boar of the forest with maize in 1972 (Credits: Carine Louis 2019).

INCREASING GAME POPULATION, THE PRODUCTION OF WILDLIFE
The increase in the boar population concerns all of Europe (Massei *et al.* 2014). On Walloon territory, this can be explained by various factors such as a more favorable climate, new agricultural and forestry practices in rural areas, or even more favorable legislation. But it is mostly historically linked to the practices of hunters. To increase the density of boar population, controversial practices have been implemented by hunting managers. Among these techniques, three in particular are singled out: feeding, sow preservation and the importation of wild boars.

Strongly encouraged in the 1980s, the feeding of wild boars is the most controlled practice (Fig. 1). There are two types of feeding: the first is supplementary or artificial feeding in the forest to help game survive harsh winters, though this one is mainly intended for deer. The second is deterrent feeding, the aim of which is to divert wild boars from cultivated fields in order to prevent possible destruction, of which hunters would be responsible. Feeding leads to a concentration of wild boar populations but also to weight gain, which causes an increase in population density. Indeed, the wild boar has the particularity of reproducing when it has reached a certain weight and not according to its age. A forest officer from the DNF notes: "Compared to thirty years ago, I am certain that there are 10 times more, at least 10 times more wild boars, solely because of feeding." Resulting from this practice, "baiting" makes it possible, during the hunting season, to prevent wild boar herds from moving too much, or to bring them from one area to another for the drives that will be organised there. "Corn is like a drug for wild boars. The purpose of feeding is to concentrate populations in certain areas", explains a DNF officer.

The second practice that aims to increase population densities consists in defining a shooting plan that preserves sows. "If you shoot a sow, you are lynched and pilloried because that sow represents a lot of work for hunters", says one hunter. By culling only the males among the wild boar population, the expansion of the herd is considerable. The hunting managers'

strategy is thus based on a “game bank” (i.e. valuable living game seen as capital) that allows them to have more and more sport animals.

The third technique is shrouded in opacity and taboos because of its illegality: the importation of live wild boars for release in the forest. “Here, we have some boars with, it must be said, very strange heads, so, uh... we’ve had wild boars with strong, super long heads, really not the wild boars we have in our forests”, explains the president of a Walloon hunt in an interview (Léonet *et al.* 2019). The theory of the introduction of foreign boars is supported by genetic analyses of the Walloon boar population, which turns out to be very heterogeneous, finding diverse origins all over Europe (Licoppe *et al.* 2018). However, these results can be explained by the fact that the importation of wild boars was a permitted practice until 1994. The rearing of wild boars or game in fenced off parks, intended to be released for hunting purposes has been prohibited since 1996.

CONFLICTING RELATIONS WITH THE WILD BOAR, TENSE CLIMATE WITH THE HUNTERS

Critics of these densification techniques denounce a form of “intensive breeding” of wild boars in the forest. This criticism leads some naturalists and farmers to question the “wild” nature of these animals fed by the hand of man (Mounet 2009; Boussin 2012).

Wild boars ravage fields, sows roll over cultivated plants to give their offspring access to seeds, and the movements of these animals cause an increasing number of road accidents (Prévot & Licoppe 2013). All this damage is accentuated when the animals are disturbed and forced to move, particularly during hunting drives. Naturalist associations also denounce the negative impact of this game on the natural environment and the integrity of the soil (Filot 2005; Delvaux 2018).

For several years in Belgium, the wild boar has slowly been moving from being a collective heritage to a problematic animal (Mounet 2008), or even an invasive pest (Lowe *et al.* 2000; Wolwertz 2016;), as its population density increases and its distribution extends over the territory. In a highly publicised manner, the wild boar is regularly accused of the consequences of its overpopulation on other activities, especially agriculture (Etienne 2015; Terlinden 2019). However, instead of the animal itself, it is the practices of certain hunters that are often the actual target of criticism: “Environments are not modified by a species, but by the interests of the people behind them”, denounces a herpetologist from a naturalist association. In the vision established by the opponents of the hunting world, the boar is the symbol of the excesses of the hunting business, which is said to be devoid of values, rituals and meaning and exclusively oriented towards business contracts signed in return for large hunting bags. Mostly criticised outside but also within the hunting world, this mode of hunting tends to be presented as the only form of existence between the Walloon hunter and game. The passionate local hunters who once did a favor to local farmers by killing predators seem to no longer exist. More fundamentally, today, it is the relation between hunter and death that is in all cases denounced: sometimes because

they have made death a “leisure” (Scherrer 2002 ; Filot 2005), sometimes because they do not kill enough. In the absence of a predator, the function claimed by hunters’ associations of regulating game populations is largely called into question, accompanied by a deeper questioning of hunting itself: why maintain hunting practices today?

It is in this particularly tense context, in which controversial hunting practices exist and tension is palpable among the hunters themselves, who are claiming different ways of doing things, that the ASF virus arrives in the south of the country. This event breaks the already shaky ground that protected hunting and its actors in Wallonia. The way of establishing and justifying the existence of hunting in the Walloon forests, already strongly questioned, finds itself in an all the more urgent need to be debated due to the role hunting is going to play in the management of the health crisis.

THE ARRIVAL OF THE VIRUS: CRISIS MANAGEMENT THROUGH THE EMPTYING OF AN AREA

THE HASTY ADVENT OF AN EXPECTED VIRUS

It all starts with a jogger who sees three dead boar carcasses over a very short distance. Then comes a forester who discovers the corpse of a sow in the middle of the path, with no apparent lesions. Shortly afterwards, one of his colleagues comes across a young boar staggering in the woods, visibly in bad shape. These unusual situations worry forest managers and bring into play those involved in health monitoring. The corpses undergo an autopsy at the Faculty of Veterinary Medicine of the University of Liège, which reveals the presence of the African swine fever virus. On September 14th 2018, Belgium officially notifies the World Organisation for Animal Health (OIE) of the identification of two cases of wild boar carrying the African swine fever virus.

A few months earlier, its possible arrival on Belgian territory had been mentioned by scientists from the University of Liège, who then warned against the considerable risk that the virus represents for wild boar due to their particularly high density in the Walloon forests, but also to the many pig farms in the north of the country. While being harmless to humans, this virus can contaminate all Suidae. It is a viral and vector-borne disease that proliferates in the body by adapting to the immune system. The virus is transmitted by direct contact between sick and healthy swine or by indirect contact via secretions such as blood, sweat or saliva of an infected animal. Soft ticks may be vectors and other living organisms can become passive vectors if they come into contact with infected subjects and move around. The ASF virus is highly resistant in this environment, but uncertainties persist as to its exact lifespan outside an infected organism. An infected animal dies within seven to ten days, succumbing to lesions and fever that cause internal bleeding. The lack of an effective vaccine (Galindo & Alonso 2017) or drug against the disease makes the management of the virus particularly challenging.

The virus is endemic in sub-Saharan Africa and was introduced for the first time in Europe through Portugal from Portuguese colonies in 1957. It spread to Spain and the surrounding Western European countries but was completely eradicated in 1995 (Cwynar *et al.* 2019), except in Sardinia, where the virus has been present since 1978 and affects both the wild boar population and domestic pigs (Mur *et al.* 2014).

In 2007, a second outbreak popped up in Eastern Europe and became permanently established there. This one first started in Georgia, followed by Russia, and it kept spreading to the West: Ukraine, Lithuania, Poland, Latvia, Estonia, Moldova, the Czech Republic, Romania, Hungary, Bulgaria, Belgium, Slovakia, Serbia, Greece and Germany. In this second outbreak, the virus mostly affected domestic pigs and wild boars, in some countries only one of them (Saegerman 2018; OIE 2020).

The virus arrived in Asia in August 2018 through northern China (Ding & Wang 2020) probably originating from Russia and moved south to Vietnam, then to the Philippines in 2019 and continued spreading through South East Asia. There, it still poses a significant threat to endemic Suidae species and socioeconomic security (Luskin *et al.* 2020). Its spread is such that it is considered a pandemic.

In the recent European outbreak, the Czech Republic was an exception; before Belgium, it was the only country that had succeeded in eradicating the disease among wild animals in their natural environment across the country (Šatrán 2019). During the management of the Belgian crisis, the Czech case was the most cited example used to demonstrate that the virus can lose ground with the help of human intervention, while all other cases show a coexistence of sick and healthy subjects that is seen as problematic.

The rate of spread of the virus in wildlife is estimated at one to two kilometres per month (SciCom 2018). The first factor of propagation is the wild boar, the reservoir of the virus. Wild boars are sedentary animals and do not tend to migrate unless they are forced to. But their movements within their territories are large and uncontrollable. Therefore they can contaminate a large territory and a large population of wild boars. Given the remoteness of the other European clusters, spontaneous spread via wild boar movements from endemic areas is considered unlikely. Humans are the second factor of spread and represent the main risk of dispersal of the disease to new regions or countries that are not territorially linked to already infected areas. Only human intervention could explain, on the basis of current knowledge, the appearance of ASF in the south of Belgium.

Five hypotheses were selected and communicated by the media to explain the arrival of the virus in the Gaume forests. Three of them directly involve hunters and hunting practices. The virus could have arrived via attractants for hunting (for example in the contaminated urine of sows in heat used to attract boars carrying beautiful trophies, i.e. their tusks). This could have happened because the virus survives in the urine for up to 15 days depending on the temperature (Adkin *et al.* 2004, qtd. in EFSA 2010). Hunting tourism could be another cause of contamination. Returning from a

hunt in a country affected by ASF with a trophy or material carrying the virus, a hunter could have infected wild boars in Belgium (Saegerman 2018). A third hypothesis casts even more doubt on the hunting community – that of the illegal importation of live wild boars from contaminated countries (Hars *et al.* 2015; De Muelenaere & Bodeux 2018). To date, a legal investigation is still underway, involving actors in a Gaume hunt for possible import of live wild boars. Another speculation implicates the military, which could have returned from a mission in the Baltic States with contaminated equipment (Saegerman 2018). In fact, wild boar carcasses in an advanced state of decomposition and viropositive were found on a wooded military site at the start of the crisis. Finally, the last possible theory is that of the unfinished contaminated pork “sandwich” left in the wild by a truck driver from Eastern Europe and then eaten by a wild boar (De Muelenaere & Bodeux 2018). Indeed, the virus persists in certain foodstuffs based on contaminated pork or wild boar meat products, such as cold cuts from 182 days in cured meat and up to 1000 days in frozen meat (Adkin *et al.* 2004, qtd. in EFSA 2010).

This mode of propagation is also the hypothesis used to explain the first ASF episode in Belgium in 1985: pigs would have been fed contaminated meat from Spain, causing 12 farms to be infected with the disease. Within a few months only, the virus was eradicated by depopulating 60 farms and sacrificing 34 041 animals (Biront *et al.* 1987).

The crisis that started in autumn 2018 is very different from the one Belgium had already experienced. The virus is spreading not among pig farms, but in the natural environment. It is no longer just one sector of activity but a whole territory and all the activities taking place there that are affected. Another strong dissonance of this crisis with the previous one is evident in the emerging debate on the origin and responsibility of its sudden arrival. The virus brings to the forefront the points of tension between representatives of the worlds of hunting and agriculture and defenders of the environment: revision of hunting policy, prohibition of feeding practices, etc.

MANAGING THE HEALTH CRISIS, ZONING THE TERRITORY
Whatever the cause of its hasty arrival in Belgium, the local fight against the virus is a major health, economic and diplomatic challenge on a broader scale, and the European Commission is keeping a close watch on it. After the confirmation of ASF cases on Belgian territory, a strategic committee is created, made up of political authorities, regional and federal administrations as well as veterinary scientific experts, epidemiologists and biologists. Its aim is to put in place an action plan based on recommendations from the European Union and European experts (European Commission 2020) to eradicate the ASF virus. “The crisis plan was not a turnkey plan, we had to adapt very hard to this very, very difficult situation” explains the chief veterinarian. The first measure established by the Belgian public authorities on the recommendations of the European Commission is to demarcate a perimeter of 63 000 hectares around the carcasses found. The forest is quickly placed under confinement and access to



FIG. 2. — Picture of access to a forest road in an ASF zone in 2018. Credits: Jean-Luc Flenal – AFP.

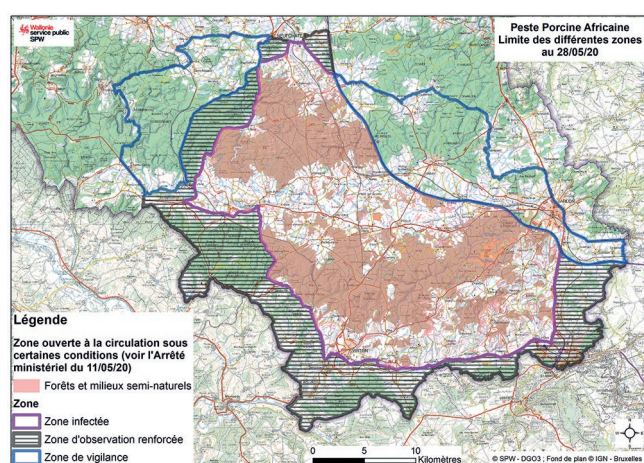


FIG. 3. — Map with delimitation of core, buffer and reinforced observation zones in May 2020. Credits: SPW.

it is banned (Fig. 2). Drastic measures are put in place and are extended by 12 months each time an infected carcass is found. This area is divided into zones where strict measures are applied (Fig. 3).

Once the zoning of the infected area has started, it is divided into quadrants with specific measures for each. The core zone (2254 hectares), the main cluster of the infection, and the buffer zone (39 491 hectares), without diseased wild boar but surrounding the core, become prohibited zones where the tranquillity of the game is the priority. Hunting, logging and simple traffic are prohibited. Access trails are closed with fences and warning tape. Within these two zones, the only people authorised are those whose mission is to search for boar carcasses with the intention of evacuating them. A third subdivision is created around the first two: the reinforced observation zone. In this area, forestry activities are authorised but regular searches for dead boars or boars showing signs of disease are carried out. The last zone on the periphery of the three others is the vigilance zone where no particular measures are applied except for a particular attention paid to the *Suidae* populating it. All carcasses found in these



FIG. 4. — Picture of a trace of lime spread for disinfection after a wild boar carcass was found along the fence around the infected area in February 2019. Credits: Didier Meunier.

zones are sent to a collection centre set up nearby and managed by the wildlife health monitoring network of the University of Liège for sampling and analysis. Fencing of more than 300 kilometers in length and 1.2 meter in height (Fig. 4) are installed to hinder the movement of wild boars between zones.

Civil protection actors come in reinforcement to the DNF agents in the search and extraction operations of the carcasses within the different zones (Fig. 5).

All actions or movements undertaken in the zones are subject to strict biosecurity measures. Clothing, vehicles and equipment must be disinfected. As the crisis unfolds and wild boars are discovered outside the zones, DEMNA officers must widen the boundaries and redefine their limits so that restrictions can be applied in the concerned area.

In addition to restricting the movement of humans and animals, zoning as a “sanitary cordon” serves as a basis for deploying a strategy for the destruction of animals, whether sick or healthy. In this fight against the virus, plans for the slaughter of domestic and wild *Suidae* are established. A “boar-free target zone” or “white zone” is defined between France and Belgium.

EMPTYING FARMS, EUTHANASING PORKS

Once containment is deployed, the public authorities’ priority is to eradicate the virus to avoid at all costs the loss of disease-free status among domestic animals in Belgium. This would deal a fatal blow to Belgian pig farming by preventing any export of pork meat. The challenge is also to recover ASF-free status for wildlife as soon as possible.

Within the professional pig farming system, two models co-exist in Belgium: the free range model or extensive farming more present in Wallonia, and the industrial pig farming model, mainly present in Flanders (Doguet *et al.* 2009). Indeed, the average size of a pig farm in Wallonia was 697 animals as against 1514 in Flanders in 2017 (SPW 2019). In addition, Wallonia has almost no pigs compared to Flanders; indeed, in the years around the ASF crisis it held only 6% of Belgian pig herds (Observatoire des prix 2015; Apaq-W 2020).

Only a few days after the confirmation of ASF cases, Belgium loses its "wildlife ASF-free" status. As a result, less than a week after the start of the crisis, nine countries suspend their imports of Belgian pork, which subsequently sees its price plummet on the international market (RTBF 2018; Statbel 2018). The government reacts and issues a ministerial decree ordering the euthanasia of all domestic pigs living within the infected area (around 4000 animals) and prohibiting restocking until further notice (Gouvernement fédéral belge 2018). "The Flemings were scared, 4000 pigs is just one pigsty there", says a member of the AFSCA. Euthanasia is synchronised across the sixty-nine different farms of the zone. The practical details of this preventive culling depend on the number of pigs. For more than ten individuals, the AFSCA lead the operation by bringing a lorry to the farm to load the animals, which are then taken to killing centres for incineration, explains the director of the animal health office of the AFSCA. For small farms with less than 10 pigs, euthanasia is carried out on the spot, with local veterinarians undertaking the killing act. The 4000 animals were euthanised within a few days. "It was better to kill them than to risk everything", explains an official of the AFSCA. "On the day of the [ASF] announcement, prices collapsed. The week after the euthanasia, prices stabilised! We sacrificed Gaumais farmers to allow others to live", says a conventional Gaumais pig farmer.

The pigs of the area were culled in just a few days. But while "emptying" a pig farm that the farmer has total control over can be very quick, even too quick, it is a much longer, arduous, hypothetical destruction that will be played out in the setting of the forest. The destruction of wild boars is part of a completely different temporality, with other strategies of "mass" slaughter.

THE IMPROBABLE CLEANING OF THE FOREST:

THE ZERO WILD BOAR OBJECTIVE

"This notion of 'white zone' is a little bit violent but excessively important, if we have the virus coming out of the infested area, we will have to extend this area and the measures that go with it. This has repercussions for Europe, but above all for pig farms and all activities in the area." (A member of the ASF strategic committee)

The wild boars follow their course in the forest but find themselves confined there. The priority is to stop the virus from spreading, so the challenge is to keep the boars from moving. Calm is very effective in attracting the boar, so anything that might disturb its tranquillity is forbidden. At first, the strict management of their population is no longer subject to human intervention: the virus kills animals it infects particularly effectively. "The ASF has the merit of managing the wild boar population instead of the hunters", explains an environmentalist. Some say wild boars' fate should be left to nature but others argue, on the contrary, that wild boars should not die suffering from internal bleeding caused by liquefaction of tissues due to the virus, however "natural" it may be.



FIG. 5. — Pictures of civil protection collecting carcasses in the infected area in February 2019. Credits: Didier Meunier.

Yet, it becomes clear very soon that the disease will not be able to beat the boars alone. Or at least not quickly and efficiently enough to achieve a zero risk of dispersal to adjacent territories. Some individuals can be healthy carriers, develop immunity and spread the virus. The crisis management technique is inspired by the Czech example: "The Czech case was closed and then we put snipers and a whole bunch of stuff. Like an atomic bomb, there was nothing left", tells one hunter. All the boars in the core area and buffer zone, with reinforced observation and careful vigilance, had to be killed; "their outright eradication is the priority", comments the chief veterinarian. A "destruction manager" is appointed, an eradication plan drawn up, those involved in these killings are trained and equipped, and tools are created. So, in addition to containment measures, the decision is made to destroy the wild boar in order to reach a "white zone" or "sanitary emptying". Whether they are healthy or carriers of the virus, all wild boars are eradicated, and the carcasses



Fig. 6. — Picture of sample of wild boar carcasses collected for analysis at the Virton collection center in January 2019. Credits: Eric Lalmand – Belga.

are extracted to clean the forest. They are then transported to the heart of the area in a civil protection building transformed for the occasion into a ASF logistics center. There, the spleen or another organ is removed from the carcass to be tested for the presence of the virus (Fig. 6).

FROM HUNTING TO THE ROUTINISED DESTRUCTION OF ANIMALS

HUNTERS' ENROLLMENT AND SANITARY RITUALS: INSTRUCTION FOR THE DESTRUCTION

In order to achieve their radical objective, public authorities now need to expertise in the destruction of animals. The destruction manager along with DEMNA and DNF officers are responsible for organising the slaughter. The army and civil defence are mobilised to prospect for carcasses. Nevertheless, it is necessary to recruit a large number of actors who could take concrete action in the process of eradication. The hunters then appear to be the most competent to carry out this particular wild boar hunt. "Since we do not have a specialised service like in France or Germany, we only have hunters. What kills animals here in Wallonia? It is the hunters, they know how to kill", explains a member of the strategic ASF committee. Like in the Czech Republic, the recruitment of hunters seems to be unavoidable. In the context of the health crisis, the skills and expertise of the hunters are seen as a means of carrying out the destruction project. A link between hunting and destruction is established and the eradication of wild boars is thought to be the continuation of the usual practices of the hunting world, as the logical mobilisation of hunting knowledge and material. However, some voices are raised against the responsibility entrusted to them: "Hunters have not been able to manage game, will they be able to manage the crisis?" expresses with indignation a naturalist working for IEW.

"To prevent the spread of ASF, we received training on the virus, how to stop it, how to pack wild boar in 'candy' and what technologies to use; the blue tarp, disinfecting the area with the Vikron®, locating the spot with longitude latitude, what to do when you see a suspicious animal and all that. From there, we were told, listen: we are going to destroy... we must destroy the wild boars..." explains a Gaumais hunter.

New methods are imposed on hunters enrolled in the conduct of their operations in the area affected by the disease. First, they are given general instructions such as to cooperate with the relevant authorities to find and report wild boar carcasses or to contribute to the progressive reduction of the density of wild boar populations in areas not yet affected by the disease. They must stop certain practices such as not targeting adult females and feeding game. Any use of dogs is also strictly forbidden except for bloodhounds when searching for wounded game, under certain conditions. Wild boar carcasses, parts of carcasses or trophies cannot be collected and must be destroyed. Hunters undergo biosecurity training to adopt new reflexes to avoid the spread of the virus in their act of destruction or "hunting." They learn how to wrap dead boars in tarps (using the so-called "candy" wrapping technique, avoiding the spread of the virus by being completely hermetic) (Fig. 7).

They are required to clean and disinfect all equipment used during hunting, including vehicles, and to wash at a minimum temperature of 60°C all clothing worn in the process. In adjacent areas that are considered to be at risk, new constraints are imposed on them. They must now wear long-sleeved waterproof and disposable gloves when eviscerating game and this must be done in the designated dressing area of the hunting ground. Before leaving the premises, hunters must clean and disinfect all equipment, clothing, vehicles and trophies they are allowed to take back. After hunting days or during any contact with wild boar, they must wait 72 hours before coming into contact with pigs.

At first, these eradication plans are not appealing. Indeed, some hunters are not inclined to kill all wild boars, especially those in areas adjacent to the core, where the virus is absent. A veterinarian says: "Collaboration with the hunters is important, we have meetings with them to explain why they have to shoot, why they have to make this 'white zone', there are some who understand well and who do everything right. And others who don't give a shit and who tell themselves: 'it wouldn't reach me'; 'I'm still going to keep my small wild boar herd because it's worth the money'. The hunters, it's like everywhere, there are good managers and then there are those who don't play the game; that's how it is!"

However, the further the virus advances and gets closer to the edges of each area, the more they become aware of what is at stake.

The hunters, once designated as responsible for the poor management of wild boars, become the guardians of the forest, with a few adjustments to their practices. From their point of view, they feel both too little solicited and not listened to in decision-making but also much too solicited in the application of these decisions.

ASF DRIVES: FROM PRESERVING TO ENDANGERING

"It is 9 o'clock in the morning when little by little cars begin to park in the town centre next to the hunting lodge of this small village in the buffer zone. There is a bad atmosphere, people arrive late, not very motivated. Everyone says hello politely. We chat. Two subgroups

form. On one side the hunters, on the other, the beaters. The hunt leader speaks and everyone forms a circle around him. 'Hello, everyone! Well, there aren't many of us today because it's the holidays in France, so many have gone skiing. As you know, we organised this day to show our good will to the DNF. We're going to try to hurry up and do the three drives because they're announcing rain this afternoon. Then we can all come and eat here. We have to kill all the boars, if there are any left!' Some hunters say: 'Do you think there are any left?', 'I still have some damage in my fields'. The hunt begins, we hear on the walkie-talkies: 'So there are boars?' 'Yes, I had to put one out of its misery, it had been shot in the hooves.' A bloodhound handler adds: 'For ethical reasons, we don't let an animal suffer, with or without swine fever.' Hunting methods in affected and high-risk areas are evolving, organised drives are turning into silent runs, new watchtowers are installed for 360° shooting. Hunting is done without hounds in a calm environment and the target is only wild boars and all wild boars." (Excerpt from field notebook, February 2019)

In order to create the white zone in the forest, ASF drive days are organised by the hunters in the areas adjacent to the core of infection. Built on the usual hunting model, with drivers or beaters pushing the game towards the standers (hunters), their only goal is to shoot as many wild boars as possible, starting with the specimens which have an important role in maintaining the population. "Now, during the drives, we will preferentially shoot the leading animal whereas, before, we shot the subordinate animals precisely to preserve the population", explains a hunter. Relations with animals and deadly trade-offs are thus transformed and brutally reduced in the urgency imposed by crisis management. The scale of the killing sees its limits totally exceeded in the context of a genuine animal annihilation: "We killed as many as possible, we put all that in a trailer. We didn't gut them because we had to put them in the rendering plant. There were flies on them, there wasn't even a hunting bag. All this stayed very far away. We weren't on a hunt. Animals that would have been preserved in other cases were shot that day. We all were like: 'Well next year, what are we going to do?'" explains another hunter after an ASF drive.

The timeline which enriches the hunting relationships and gives them meaning is erased: the time margin which includes the pursuit of the animal, the time of enjoyment in the sharing of the animal's remains and the meals that follow, all of that becomes prohibited. The sequence of essential stages of hunting is disturbed: "The hunting episodes take place in a form of dramatic progression, from the stalking of the big game, which leads the hunters from the edge of the woods to their center; the death of the animal is accompanied by symbolically charged gestures like bleeding, castrating or emptying" (Segalen 2017). Saving an animal in order to preserve it for the next year is also part of the temporality that turns an animal into game. The hunting ritual is intentionally paced and this



FIG. 7. — Pictures of wild boar carcass wrapping and disinfection in February 2019. Credits: Didier Meunier.

time helps to build the meaning of the activity. With ASF, you have to kill but above all kill immediately. The killing of the animal usually surrounded by moments that make it a hunting practice is reduced to just a moment. The future game prospects are no longer allowed to exist because everything must be killed now.

ONE LEVEL UP TO REACH THE GOAL: THE TOTAL DESTRUCTION

"We have to kill them, they're sick, we have to get rid of them, but we have to do it with a certain dignity."
(A Gaumais hunter)

The virus and drives alone do not achieve the goal of zero boar. The administration then authorises an arsenal and deploys new practices to deal with the most recalcitrant boars. As part of the fight against ASF, it is said that "[d]estruction can be carried out by means of or using nets, traps, capture enclosures and all other devices allowing the capture of live boars; light sources, euthanasia products, firearms, silencers and night scopes and flushing dogs" (Licoppe *et al.* 2020).

A big part of the fight against the virus lies in locating boars, whether they are dead or alive, infected or healthy. Tracking techniques and equipment are used to locate the animals to be destroyed, as well as carcasses. Initially, it is not difficult to kill or catch wild boars, but as time goes by, they become scarcer and more distrustful. Normally, game shooting is permitted only one hour after sunset. In the context of the destruction of wild boars, this period is extended to two hours and even all night under certain conditions. "Destruction agents patrol the woods by day to shoot as many boars as possible. Then, to



FIG. 8. — Pictures of a circular trap in test stage in the infected area in January 2019. Credits: Didier Meunier.

increase the effectiveness of these shots, they are starting to be also used at night and on the plains. Indeed, wild boars like to come out of the forest at night to root in the earth. At first with the help of light spots and then with night vision goggles lent by the army, shooting teams composed of DNF agents and hunters are on the field day and night, during the week and on weekends to shoot wild boar”, explains a forest officer.

To do this, local hunters but also administration officials equip themselves with night vision goggles to spot wild boars at night. Before the crisis, however, their use was not widespread and above all very frowned upon, assimilating their owners to poachers. Administration officers are allowed to mount the vision goggles directly on the rifle, which is prohibited for hunters. In addition to night vision goggles, cameras with automatic triggers are installed and thermal imaging cameras are used to locate the last recalcitrant boars. In order to evaluate the work that remains to be done, the exploration of tracks and clues of passage by the animals is essential.

Exceptional resources are also mobilised in terms of killing equipment: “There are hunting right holders who have heavily equipped their men to go and kill wild boars, they understood that ASF was serious”, explains a gamekeeper. Ammunition normally reserved for small game hunting is authorised to destroy wild boar. “Obviously, we have to respect the animals but in these destruction hunts, we allowed shooting with small, so-called shotgun pellets. So, for young wild boars, as they are very small, to be sure to have them, the hunters were allowed to shoot with small pellets, the way we shoot small game [...] it is destruction, all weapons and all means are authorised”, reports a hunter.



FIG. 9. — Picture of a rectangular trap hidden among trees in the infected area in February 2019. Credits: Didier Meunier.

These brutal practices lead to new personal experiences – painful and loaded with goals that are neither fully shared, nor appropriate. This in turn causes suffering among many actors – a form of suffering which is more or less accepted according to the principle of sacrifice. “I have colleagues, they fell on a nest a fortnight ago, it’s quite rare but there were four young boars. So he had to take the rifle to shoot the four little ones huddled together... you really have to have a heart of stone or not give a damn if you’re not moved by that! They can’t help it, they didn’t ask anyone for anything and then wham, we shoot them. They weren’t even sick! You have to destroy, so you destroy and you can’t have any scruples, but it’s not possible to say that you’re not moved by it, honestly, it’s not possible. Even my fellow hunters, they hate doing that. It was a hunter who killed the boarlets, he told me ‘that’s not hunting’, it’s destruction, it’s a massacre and that, frankly, it’s really difficult to live with”, says one forestry officer.

TRAPPING AND AVERSION

All the skills available in the administration being valued, a whole trapping strategy is also put in place. “Normally, the law on hunting in Wallonia does not provide for the trapping of wild boars as a hunting method. Exceptions exist in the context of specific destruction requests in order to guarantee public health and safety” (Gouvernement wallon 2002). Since November 2018, DEMNA officers, who are used to trapping in their wildlife monitoring activities, have been placing traps in the reinforced observation zone and then in the buffer zone, assisted by the DNF and hunters. “They announced that we were going to set traps because we couldn’t shoot them all. And these traps, they would be managed by the hunters. This is how it happened...” explains a Gaumais hunter.

Following an online survey of hunters and consultation meetings with local stakeholders, the traps are installed at strategic locations in the woods: former feeding places, frequent crossing points or right after fences to catch those that have managed to get through. Some traps consist of cages that catch individuals, others are made of circular fences with a trap door to catch entire companies of wild boars (Figs 8, 9).

To bring the animals closer to the traps, officers use wood tar, the scent of which is picked up by wild boars at a great distance (Fig. 10). They make sure to use the brand that the local animals are used to. "Even if the use of such attractants is illegal in Wallonia, each hunting territory uses (or used) this type of attractant, it is therefore essential to know the brand used locally to save time" (Licoppe *et al.* 2020). When they are around, maize is used to bait them inside the traps.

It is necessary to check the traps regularly in order to prevent the animals from breaking them, to quickly kill the trapped boars and evacuate the carcasses before resetting the traps. "They're trapped and they know it, so they spin around to try to escape, they jump into the metal grids, it's horrible to see that, frankly... someone who's emotional, frankly you don't know how to cope with that... It's a brutal force, it's big, it's massive", explains the companion of a hunter who accompanied him on the ground. Some advice to the hunter/trapper was given in order to make the task less tedious, for example to start killing the largest animal first (Licoppe *et al.* 2020) or what ammunition to use during the "execution" of trapped boars. The wild boars caught in the traps or spotted within a radius of 50 meters around them could be shot during the whole night by the hunters. "There was a double attitude: there was the boar caught in the trap, I almost want to say it's a shame, so you kill it. On the other hand, there were all these small policies concerning the periphery of traps where there were wild boars. It was destruction that looked more like real hunting action, and there, it was relatively interesting because we still had the possibility of stalking near the traps game that was not trapped. The wild boars, at one point, they no longer fell into the traps, they had understood", explains a hunter and trap manager.

Over time, the remaining boars grew increasingly wary and did not fit inside the traps anymore. The administration also realised that "the tedious nature of the task and the aversion to slaughtering wild boars by this technique unusual for local hunters" (Licoppe *et al.* 2020) could make trapping less and less effective. They then tried to have an optimal degree of collaboration with the owner, the hunter or the local gamekeeper in charge of the trap. Then, as the crisis progressed, it took over the management of the traps. "When you come to check a trap, you have to hurry. When there's a whole company of boars running around screaming, you gotta hurry. Cause they figure out what's about to happen when they see you coming. It's inhuman... When you shoot at the boars and some of them get up and push the other dead ones around with their snout as if to wake them up, it's inhuman. It's disgusting to have to do that", relates a hunter.

The frantic fight against the virus has also become an opportunity for hunters to reveal the heterogeneity of practices and conceptions among their own ranks. "Between hunting neighbours, it didn't always go well... between those who took responsibility and who did what had to be done and those who didn't give a damn about the virus", says a gamekeeper. While some hunters get involved in concrete actions on the ground, others reject them. "Certain territories have played the game, some absolutely not, there are territories which refused to participate in the global destruction effort", explains a member of the strategic ASF management. A climate mixing mistrust, disapproval and repression sets in. The administration then imposes drive days and orchestrates them



FIG. 10. — Picture of a tree with wood tar and boar tusks' mark on it in February 2019. Credits: Didier Meunier.

itself. The cameras supposed to monitor the wild boars could monitor the hunters and the trapping statistics could be studied to verify the good faith of the trappers. "At one point, there were the cameras, if you passed that way you risked being filmed, we shouldn't... there were all these modern means of policing us", tells a hunter. The administration does not hesitate to show that if the "dirty work" is not done, someone else will come and do it anyway: "In the administration, we have developed a military process, because it's only in the army that this is done! It's based on the principle of mounted reconnaissance patrols. 'Mounted' means in a vehicle, so with a driver, a shooter and an observer with a thermal camera. And so at that time, there was a whole network of patrols in the different areas. But, for emotional and economic reasons, as the hunters were not always doing their job, the work was not very evenly done, I mean, I had to send this special destruction patrol to go and clean up certain areas which were rich in wild boars", explains a crisis administrator.

BELGIUM RECOVERS ITS ASF FREE STATUS THE END OF THE CRISIS?

WHAT REMAINS OF THE DIRTY JOB?

“We have to realise that when we walk in the forest, when we hunt, the game that we observe is a component of the previous year. Now all that’s left is these traces of lime.”
(A hunter from the core zone)

If, on a national scale, the virus is contained and Belgium is cited as an example of “good management”, from a local point of view, the scale of the sacrifices is questionable. During the entire crisis, Belgium has had a total of 833 wild boars positive for the virus, most of which died from the disease. In fact, of the 1339 trapped boars, only four were positive and of the 1743 ones killed during night shooting or any other action of destruction, only nine carried the virus. Their eradication is still scheduled for 2021 in the different zones. In total, 5525 wild boar carcasses were analysed across the entire Walloon region⁵.

“Today we are free from ASF and we continue to want to eradicate them. It’s still kind of the hunters’ toy, wild boars! So we want to but we must not mess around in any way”, confesses a Gaumais hunter. What is the cost of this temporary conversion to sanitary rituals? What are locals hoping for and what place and role with respect to the forest would this allow them to negotiate for themselves in the future? Finally, changes taking place in the hunting world will also affect relationships with wild boars and their way of life. A hunter says: “We don’t have any more boars so now we respect them even more!” How will wild boars return to the forest and in what context will they interact with humans? In the post-crisis world, what will remain of the Gaumais wild boars and their networks of relationships with other humans and non-humans?

HUNTING: PASSION, LEISURE, RIGHT OR JOB?

“Hunting is a hobby and you pay to hunt. From the moment you are asked what the hunters were asked in the ASF zone, it was work and normally, for a job, you do not pay, you are paid to do it. What we asked of them was work.”
(A crisis administrator)

If the eradication of wild boars is not hunting and is not the responsibility of the hunters, to whom should the dirty work be left? The ASF crisis has revived the debate on hunting turned into a profession defined as the strategically organised killing of wild animals. Like Germany or France, Belgium could equip itself with destruction agents: “Personally, to do this kind of dirty work, I’d rather they had a state label than the hunter label”, explains a member of the strategy committee. However, the cost that such destruction brigades would represent, the stakes linked to the many private forests and the importance of the hunting tradition in Belgium keep the implementation of such a solution at bay. “So what? The hunters, what are they gonna do? It’s still a passion back there! It remains a right! Since here we have a large part of private forest, it would surprise

me that officials come to private estates to kill the wild boars of Mister the heir to what’s-his-name [...] Hunting remains a right, it has a name and it is legislated!” claims a hunter. Yet in Europe as in Wallonia, hunting as it is currently practiced no longer makes it possible to control the evolution of wild boar populations (Massei *et al.* 2014). The ASF crisis could bring a lasting metamorphosis in their practices and, in particular, lead to a reflection on the alterations that affect the world of hunting and animal husbandry. “The ecology of infectious diseases has shown that viruses are not intentional entities aimed at killing human beings but are rather signs of an imbalance between the species in an ecosystem” (Keck 2020).

THE CHASM IN MEANING: HOW TO MAKE SENSE?

“But the dirty work, not many did it because there are a lot of hunters who washed their hands of it.” (A gamekeeper)

By taking them away from their attributions or their hunting customs, the urgency of killing all wild boars forces hunters, most of whom are locals, to renounce their ethics and their usual practice to do “the dirty work”. Seen from the outside, this task of extermination could appear to be part of the continuity of their habits, to be similar to hunting practices (Keck 2020): tracking and then killing. However, the routinised, systematic and unconditional slaughter imposed on these actors does not have the same symbolism as in standard practices. The sanitary rituals define gestures carefully planned by experts who, guided in turn by a concern for efficiency and control, leave little room for negotiation. Hunting rituals are disappearing: the absence of sharing, of congratulations from the community of hunters, of hunting bag (i.e. the scene displaying the game carcasses and representing the moment of homage to the animal), negates the symbolic dimension surrounding the killing. The removal of the carcass, its butchering and trophies, blurs the meaning of the act of killing. “To kill a boar to put it in a plastic bag, that doesn’t interest anyone!” claims a hunter. In the face of the African swine fever, it is a matter of putting out of their misery animals that are not difficult opponents (boarlets, sick or trapped animals, etc.) and putting to death the healthy animals with all available means, in the name of the sanitary emptying. “So the fact of being a hunter and taking the lives of animals, it must be done in a context that allows it to be integrated and accepted, in a moral way. Now, to do it in the name of a disease, it means you are guilty of the crime of being a wild boar, I’ll shoot you and that’s it! That’s more difficult”, explains a Gaumais hunter. Others point out that the animal, having no chance of being spared at the moment or in the near future, cannot be considered as game. The choice of taking the animal or leaving it alive would thus be part of the act of hunting and would help to give it meaning and legitimacy. Trapping and killing in a cage are not hunting practices because the animals have no chance of escaping the hunter. “But here we do not hunt, we destroy. When we hunt we screw up a lot of times and that’s important”, explains a hunter. As Roberte Hamayon notes, there is an inseparable link between game and luck; “[t]he animal’s gift is therefore considered the direct reason for taking the game, and it will be subjectively perceived as the

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manifestation of the hunter's luck. [...] Thus, whether we speak of the animal's gift or the hunter's luck, the issue is the freedom left to individuals in directing the exchange with the hunted species" (Hamayon 2010). What freedom could be traded in a relationship of destruction, when the animal cannot give itself up, being exterminated with the use of techniques that leave nothing to luck? Consequently, the relationship between the hunter and their prey cannot be built under the conditions of the absolute eradication of a living being. Killing is no longer a hunter's choice but a social imperative. "The animal then becomes (or precautions are taken for it to be) an object, the killer becomes a simple operator (not an actor)" (Rémy 2004).

CONCLUSION

The arrival of the ASF on Belgian territory and the emergency management linked to it has shown how difficult it is for actors involved in local action to blindly apply orders coming from a distant organism positioning itself as the guardian of a so-called "knowledge" and "common good". Far from the routines that usually govern nature on the concerned territory, a new collective of experts in animal and disease management is mandated by the political world and guided by the decisions of the European Union. They impose the choice of which animals "to let live and to kill" (Keck 2012), following interests which are largely delocalised. If the destruction of the Gaumais Suidae is intended to be global, it is a precaution that is imposed to keep the Ardennes game capital and the national pork industry safe. Given the scale and nature of the task, it turns out that acts of destruction cannot be carried out by State agents alone. They need the knowledge, equipment and involvement of local hunters as back-up. Cooperation in the field is sometimes trying, whether it is between the group of hunters and the one of administrative agents, but also within these two collectives. From partisan to recalcitrant, every actor appropriates things in a specific way.

If in some media arenas, the logic of the hunting sector, widely perceived as a homogenous environment, is questioned – once in the heart of the infected area, they become allies in the management of the disease, whose evaluation criteria are centred on effectiveness in tracking and killing. The crisis seems to be restoring hunting skills and its justifications in the management of the territory while at the same time eroding its meaning for hunters themselves. Indeed, the massive destruction and the search for the unlikely white zone of the territory lead to a redefinition of relationships and consequently of the boundaries of what is hunting and why. In the management of the African swine fever, the "sanitary ritual" imposes and legitimises a theoretical eradication of all wild boars, whereas killing has always been considered a preserving practice of game capital, heritage, relationship, and symbolic gestures for those involved in animal killing. These sometimes soft and sometimes brutal unintentional changes ultimately establish a different relationship between humans and animals, which confronts them to new dilemmas.

The dilemma is first of all ethical: how can one from killing in a relationship marked by "gift" and "luck" with individuals to killing them for the supposed "good of all" through sanitary

rituals? Secondly, the dilemma is practical: even though they share some gestures, mobilise the same type of knowledge and an a priori identical end (death), the usual practices of hunters cannot be reduced to the destruction of an animal species. This equates to ignoring what they can do, what they have learned to do and what they want to do, turning them into death operators. The wild boar, for its part, loses its status as game and even as an animal when faced with the hunter who has become an executing agent; it becomes the object of treatment. Animal management techniques in the context of infection refer to different conceptions of human and non-human collectives (Keck 2020), far away from the traditional hunter-and-prey relationship. The dilemma is finally sensitive; through all these accounts, the suffering is manifest without being really described or framed. On the human side, we have those actors evoking the sacrifices and the brutality, politically and scientifically accepted and mediatically trivialised of this unbridled animal eradication. This feeling is present on the side of the animals too, as they are hunted down by disease or by humans and thus have their death assured anyway at the end of the day.

The well-being of wild boars seems to be absent from the considerations given to the management of the crisis but also to its past and future management. Wild boars, an already polemical animal *per se*, now seen as troublesome possible reservoirs of disease, are now assessed only in terms of risk. Their new place in the Gaumais forests and the terms of their return are still uncertain. At the end of this investigation, the legitimacy of the justifications for the total destruction of the wild boars remains questionable. Already problematic and invasive before the arrival of the ASF, with the new risk it poses as a new disease spreader, has the wild boar not been a victim of its pre-crisis status? "Killing must become a last resort. At present, it is all too often taken up as the first, cheapest and easiest option, especially when those targeted are already unpopular 'invasive pests'" (Van Dooren 2011). The term of "dirty work", which involves work that is undesirable, morality objectivable, or otherwise carries stigma (Hughes 1962; Ashforth & Kreiner 2013) was chosen to illustrate what has been done in the field. This concept appears to be appropriate to show the violence, for both hunters and wild boars, both already stigmatised, of this extraordinary and morally questionable goal of eradication.

Through the monitoring of this crisis, we wanted to propose a descriptive and ethnographic approach that goes beyond an analysis of the management of the situation through sanitary considerations. We aimed to contribute to the recognition of hunters' experiences with this animal slaughter, its re-ritualisation processes, the divergences between actors dealing with the crisis and the silence surrounding destruction. It will help to move the framework of what restricts the management of human-animal relation. Our investigation reveals how the fates of hunters and wild boars are intimately linked and their modalities of existence intertwined. If their "alliance" was largely controversial before the crisis, it places them both in a strong mode of existence (Roué *et al.* 2016), as autonomous, emblematic subjects: to defend it, the hunters do not hesitate to maintain a relatively opaque posture of justification and short-termism. The crisis and its management, if they apparently

mobilise the skills of the hunters and their “license to kill”, the registered boars as well as the wild ones in a weak mode of existence: they are made the tools of a problematic and of a public utility which goes beyond them, by actors who enroll and redefine them. Through the destruction project, both human and non-human allies are set up as enemies so that the survival of one depends on the failure or even the destruction of the other. Which, we can hypothesise, is not more durable than the strong mode of existence (Souriau 2009; Stengers & Latour 2009).

It is interesting to point out how, despite this juggernaut of destruction annihilating every existing thing by any possible means, the living continues to negotiate its place in the world. How should people live with problematic animals (Mounet 2008), either a wild boar or a virus, on a territory in crisis? How can the uncontrollable nature of living things be managed? This crisis obviously revives the debate on our cohabitation with animals but also between ourselves. The changes in terms of status on both the human and non-human side experienced during ASF force us to question the alleged homogeneity of groups that are foreign to us but also the modalities of future co-existence. What could have been the alternatives to this crisis management? And above all, what possible future existence is possible for hunters and wild boars in Gaume?

The African swine fever virus allows us to question our perception of “business as usual” and provides an opportunity to reflect on “living with” the virus but also with other things that may be considered pests. The question that arises from that is what this management, through destruction, reveals about “living together” (Haraway 2016). Moreover, ASF makes historically rooted “humanimal” arrangements visible and problematic (Estebanez *et al.* 2013), and leads the affected actors – whether human or animal – to engage in experiments to produce new holds on this life-disrupting situation. These experiences deal with relationships that are (un)making themselves, transforming and connecting them in different ways, while crisis management is seen as an attempt to “return to normal”. The greatest difficulties in health crisis management lie in the fundamental aspect that relationships with other living things are not the same for everyone, and that attempting a conception of a future together in a shared world is infinitely complex.

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REFERENCES

- ADKIN A., COBURN H., ENGLAND T., HALL S., HARTNETT E., MAROONEY C., WOOLDRIDGE M., WATSON E., COOPER J., COX T. & SEAMAN M. 2004. — *Risk Assessment for the Illegal Import of Contaminated Meat and Meat Products into Great Britain and the Subsequent Exposure of GB livestock (IIRA): Foot and Mouth Disease (FMD), Classical Swine Fever (Csf), African Swine Fever (Asf), Swine Vesicular Disease (Svd)*. Veterinary Laboratories Agency, New Haw, 316 p.
- AFSCA 2020a. — *Peste porcine africaine (PPA): la Belgique retrouve son statut indemne au niveau européen* [Communiqué de presse]. AFSCA, Bruxelles. <http://www.afsca.be/professionnels/publications/presse/2020/2020-11-20.asp>, last consultation on 17 March 2021.
- AFSCA 2020b. — *Peste porcine africaine (PPA): la Belgique retrouve son statut indemne au niveau mondial!* [Communiqué de presse]. <http://www.afsca.be/professionnels/publications/presse/2020/2020-12-21.asp>, last consultation on 17 March 2021.
- APAQ-W 2020. — *Informations générales sur le porc wallon*. Agence wallonne pour la Promotion d’une Agriculture de Qualité, Namur. <https://www.apaqw.be/fr/informations-generales-sur-le-porc-wallon>, last consultation on 17 March 2021.
- ASHFORTH B. & KREINER G. 2013. — Dirty work and dirtier work: Differences in countering physical, social, and moral stigma. *Management and Organization Review* 10 (1): 81-108. <https://doi.org/10.1111/more.12044>
- BECO C., BURTON M.-S., DAWANS L., MENDONÇA A., DEVALCKENEER O., EMOND P., JACQUEMIN V., LEGRAND S., MOSSE R., PINET C., RINGHOFFER F. & SCHMITZ T. 2019. — *En quoi l’émergence de la peste porcine africaine questionne les modalités de gestion d’une crise et du vivant impliqué dans celle-ci, à l’échelle d’un territoire?* Université de Liège, Arlon, 107 p.
- BIRONT P., CASTRYCK F. & LEUNEN J. 1987. — An epizootic of African swine fever in Belgium and its eradication. *Vet Record* 120 (18): 432-434. <https://pubmed.ncbi.nlm.nih.gov/3603981/>, last consultation on 29 March 2021.
- BOUSSIN L. 2012. — Chevreuils et sangliers: le retour du sauvage?, in DALLA BERNARDINA S. (ed.), *L’appel du sauvage: refaire le monde dans les bois*. Presses Universitaires de Rennes (coll. Essais), Rennes: 131-145.
- CWYNAR P., STOJKOV J. & WLAZLAK K. 2019. — African swine fever status in Europe. *Viruses* 11 (4) 310, 17 p. <https://doi.org/10.3390/v11040310>
- DE MUELENAERE M. & BODEUX L. 2018. — Comment la peste porcine a-t-elle atteint la Wallonie? *Le Soir* 19 septembre 2018. <https://plus.lesoir.be/179420/article/2018-09-19/comment-la-peste-porcine-t-elle-atteint-la-wallonie>, last consultation on 17 March 2021.
- DELVAUX L. 2018. — *Peste porcine africaine: quand les responsables se font passer pour les victimes!* [Communiqué de presse]. Fédération inter-environnement Wallonie, Namur. <http://archive.iew.be/peste-porcine-africaine-quand-les-responsables-se-font-passer-pour-les-victimes>, last consultation on 17 March 2021.
- DESPRET V. & PORCHER J. 2002. — Anim. d’élev. ch. porte parole et plus si aff. Les animaux d’élevage sont en voie de disparition, in BOULLIER D. (ed.), *Cette violence qui nous tient. Cosmopolitiques* 2: 74-90.
- DING Y. & WANG Y. 2020. — Big government: The fight against the African swine fever in China. *Journal of Biosafety and Biosecurity* 2 (1): 44-49. <https://doi.org/10.1016/j.jobbb.2020.04.001>
- DOGUET A., MOREAU A. & FELTZ C. 2009. — *Expertise agro-alimentaire: la localisation des élevages intensifs porcins et avicoles*. Conférence permanente du Développement territorial Région wallonne. (coll. Notes de Recherche; 7), Jambes, 62 p.
- EFSA PANEL ON ANIMAL HEALTH AND WELFARE (AHAW) 2010. — Scientific opinion on African swine fever. *EFSA Journal* 8 (3), 149 p. <https://doi.org/10.2903/j.efsa.2010.1556>

- ESTEBANEZ J., GOUABAULT E. & MICHALON J. 2013. — Où sont les animaux? Vers une géographie humanimale. *Carnets de géographes* (5). <https://doi.org/10.4000/cdg.1046>
- ETIENNE C. 2015. — *Le sanglier: rencontres privilégiées avec la bête noire*. Biotopie, Mèze, 352 p.
- EUROPEAN COMMISSION 2020. — *Strategic Approach to the Management of African Swine Fever for the EU*. European Commission – Director General for health and food safety [Working Document; SANTE/7113/2015-Rev 12], Brussels, 27 p.
- FABRE D. 1987. — Le rite et ses raisons. *Terrain* (8): 3-7. <https://doi.org/10.4000/terrain.3148>
- FABRE-VASSAS C. 1982. — Le partage du *ferum*: un rite de chasse au sanglier, in BROMBERGER C. & LENCLUD G. (eds), *La chasse et la cueillette aujourd'hui. Études rurales* (87-88): 377-400. <https://doi.org/10.3406/rural.1982.2899>
- FILOT O. 2005. — L'usage de la forêt wallonne. *Courrier hebdomadaire du CRISP* 27 (1892): 5-51. <https://doi.org/10.3917/cris.1892.0005>
- GALINDO I. & ALONSO C. 2017. — African swine fever virus: A review. *Viruses* 9 (5): 103. <https://doi.org/10.3390/v9050103>
- GOVERNEMENT FÉDÉRAL BELGE 2018. — *Arrêté ministériel portant des mesures d'urgence concernant la lutte contre la peste porcine africaine*. Gouvernement fédéral belge, Bruxelles, 2 p.
- GOVERNEMENT WALLON 2002. — *Arrêté du Gouvernement wallon permettant la destruction de certaines espèces de gibiers*. Gouvernement Wallon, Namur.
- HAMAYON R. 2010. — Le « don amoureux » de la proie est l'autre face de la « chance » du chasseur sibérien. *Revue du MAUSS* 36 (2): 171-181. <https://doi.org/10.3917/rdm.036.0171>
- HARAWAY D. J. 2016. — *Staying with the Trouble: Making Kin in the Chthulucene*. Duke University Press, Durham, London, 312 p. <https://doi.org/10.1215/9780822373780>
- HARS J., ROSSI S., FAURE E., TACONET A.-E., GAY P., LANDELLE P. & RICHOMME C. 2015. — Risques sanitaires liés à l'importation de gibier sauvage d'élevage et de repeuplement, in ANSES (ed.), *Spécial vigilance vis-à-vis des maladies exotiques. Bulletin épidémiologique, santé animale et alimentation* (66): 48-50.
- HELL B. 2012. — *Sang noir: chasse, forêt et mythe de l'homme sauvage en Europe*. L'œil d'or (coll. Essais et entretiens), Paris, 336 p.
- HOUSEMAN M. 2002. — Qu'est-ce qu'un rituel? *L'Autre* 3 (3): 533-538. <https://doi.org/10.3917/la.009.0533>
- HUGHES E. C. 1962. — Good people and dirty work. *Social Problems* 10 (1): 3-11. <https://doi.org/10.2307/799402>
- KECK F. 2012. — Faire mourir et laisser vivre. Grippe aviaire et rituels sanitaires à Hong Kong. *Cahiers d'anthropologie sociale* 8 (1): 89-101. <https://doi.org/10.3917/cas.008.0089>
- KECK F. 2020. — *Les sentinelles des pandémies: chasseurs de virus et observateurs d'oiseaux aux frontières de la Chine*. Zones Sensibles, Paris, 234 p.
- LATOUR B. 2017. — *Où atterrir? Comment s'orienter en politique*. La Découverte (coll. Petits cahiers libres), Paris, 160 p.
- LÉONET T., SCHEVENELS H. & SINIMALÉ K. 2019. — *Peste porcine Africaine: scandale prévisible*. Université de Liège; Studiobus, Liège [Reportage vidéo].
- LICOPPE A., DELLA LIBERA F., LINDEN A., VOLPE R., LESENFANTS C., PATERNOSTRE J., GILLIAUX G., KAMDEM N., FLAMAND M. C., NIZET S., BERTOUILLE S., MORELLE K., PRÉVOT C., BALLIGRAND B., DENIES L., MALENGREAUX C., LIEVENS J., WIDAR J., HANSENNE F., TERNEUS A. & HERMAN M. 2018. — *Bilan des études relatives au sanglier en Wallonie, avant le foyer de peste porcine africaine*. SPW-DGO3-DEMNA-DNE, Gembloux, 126 p.
- LICOPPE A., LIEVENS J., DELLA LIBERA F., HERRIN T., MALENGREAUX C., BOUDART J.-L., DE WAELE V., FICHEFET V., LINDEN A., LESENFANTS C., VAN GOETHEM A., VILLERS M., SCOHY J. P. & HERMAN M. 2020. — *Recours au piégeage du sanglier dans le cadre de la gestion de la peste porcine africaine en Wallonie: aspects pratiques, résultats, préliminaires et recommandations*. SPW-DGO3-DEMNA-DNE, Gembloux, 52 p.
- LOWE S., BROWNE M., BOUDJELAS S. & DE POORTER M. 2000. — *100 of the World's Worst Invasive Alien Species: a Selection from the Global Invasive Species Database*. The Invasive Species Specialist Group (IUCN/ISSG), Auckland, 12 p.
- LUSKIN M. S., MEIJAARD E., SURYA S., SHEHERAZADE, WALZER C. & LINKIE M. 2020. — African swine fever threatens Southeast Asia's 11 endemic wild pig species. *Conservation Letters* e12784. <https://doi.org/10.1111/conl.12784>
- MASSEI G., KINDBERG J., LICOPPE A., DRAGAN G., SPREM N., KAMLER J., BAUBET E., HOHMANN U., MONACO A., OZOLINS J., CELINA S., PODGÓRSKI T., FONSECA C., MARKOV N., POKORNY B., ROSELL C. & NÁHLIK A. 2014. — Wild boar populations up, numbers of hunters down? A review of trends and implications for Europe. *Pest Management Science* 71 (4): 492-500. <https://doi.org/10.1002/ps.3965>
- MOUNET C. 2008. — Vivre avec des animaux « à problème »: le cas du loup et du sanglier dans les Alpes françaises. *Revue de Géographie Alpine* 96 (3): 55-64. <https://doi.org/10.4000/rga.553>
- MOUNET C. 2009. — Quel « vivre ensemble » possible avec le loup et le sanglier?, in FRIoux S. & PÉPY É. A. (eds), *L'animal sauvage entre nuisance et patrimoine: France, XVI^e-XXI^e siècle*. ENS Éditions (coll. Sociétés, espaces, temps), Lyon: 71-82.
- MUR L., ATZENI M., MARTINEZ-LOPEZ B., FELIZIANI F., ROLESU S. & SÁNCHEZ-VIZCAÍNO J. 2014. — Thirty-five-year presence of African swine fever in Sardinia: History, evolution and risk factors for disease maintenance. *Transboundary and Emerging Diseases* 63 (2): e165-e177. <https://doi.org/10.1111/tbed.12264>
- OBSERVATOIRE DES PRIX 2015. — *Actualisation de l'étude sur la filière porcine*. Institut des comptes nationaux, Bruxelles, 81 p.
- OIE 2020. — *Global Situation of African Swine Fever: 2016-2020*. World Organisation for Animal Health (coll. African Swine Fever (ASF) Report; 47), Paris, 2 p.
- PRÉVOT C. & LICOPPE A. 2013. — Comparing red deer (*Cervus elaphus* L.) and wild boar (*Sus scrofa* L.) dispersal patterns in southern Belgium. *European Journal of Wildlife Research* 59 (6): 795-803. <https://doi.org/10.1007/s10344-013-0732-9>
- RÉMY C. 2004. — L'espace de la mise à mort de l'animal: ethnographie d'un abattoir. *Espaces et sociétés* 118 (3): 223-249. <https://doi.org/10.3917/esp.118.0223>
- ROUÉ M., MANCERON V., DENAYER D., MOUGENOT C. & DORÉ A. 2016. — Les animaux comme révélateurs et passeurs de frontières, in HUBERT B. & MATHIEU N. (eds.), *Interdisciplinarités entre natures et sociétés. Colloque de Cerisy*. Peter Lang (coll. EcoPolis), Bruxelles: 323-334.
- RTBF 2018. — *Peste porcine: les éleveurs belges sont "très inquiets"* [Communiqué de presse]. https://www.rtbf.be/info/belgique/detail_neuf-pays-suspendent-leurs-importations-de-porc-belge-guy-duquenne-secretaire-de-l-association-provinciale-des-eleveurs-de-porcs-du-hainaut-reagit?id=10022887, last consultation on 17 March 2021.
- SAEGERMAN C. 2018. — Découverte inattendue de la peste porcine africaine en Belgique. *Épidémiologie et Santé animale* 73: 147-164. <http://hdl.handle.net/2268/232950>
- ŠATRÁN P. 2019. — *African Swine Fever in Wild Boar in the Czech Republic* [Communication]. SCoPAFF, Bruxelles, 35 p.
- SCHERRER V. 2002. — *Réinventer la chasse pour le XXI^e siècle*. [Avis adopté par le Conseil économique et social au cours de sa séance du mercredi 11 décembre 2002]. Conseil économique et social, Paris, 266 p.
- SCICOM 2018. — *Risques de dispersion du virus de la peste porcine africaine dans la faune sauvage et d'introduction et de propagation aux exploitations porcines belges*. Comité scientifique de l'Agence fédérale pour la Sécurité de la Chaîne alimentaire (coll. Avis rapide; 16), Bruxelles, 34 p.
- SEGALIN M. 2017. — *Rites et rituels contemporains*. Armand Colin (coll. Cursus), Paris, 176 p.

- SOURIAU É. 2009. — *Les différents modes d'existence, suivi de: Du mode d'existence de l'œuvre à faire*. Presses universitaires de France (coll. MétaphysiqueS), Paris, 224 p.
- SPW 2019. — *Évolution de l'économie agricole et horticole de la Wallonie. Bilans et perspectives*. SPW éditions, Jambes, 112 p.
- STATBEL 2018. — *Une année 2018 difficile pour le secteur agricole* [Communiqué de presse]. <https://statbel.fgov.be/fr/nouvelles/une-annee-2018-difficile-pour-le-secteur-agricole>, last consultation on 17 March 2021.
- STENGERS I. & LATOUR B. 2009. — Le sphinx de l'œuvre, in SOURIAU É. (ed.), *Les différents modes d'existence*. Presses universitaires de France (coll. MétaphysiqueS), Paris: 1-75.
- TACK J. 2018. — *Wild Boar (Sus scrofa) Populations in Europe: a Scientific Review of Population Trends and Implications for Management*. European Landowners' Organization, Brussels, 56 p.
- TERLINDEN T. 2019. — *Gestion du sanglier en Wallonie: verrouillages systémiques et interface chasseur/agriculteur*. Doctoral thesis, Faculté des bioingénieurs, Université catholique de Louvain, 95 p. <http://hdl.handle.net/2078.1/thesis:22411>
- VAN DOOREN T. 2011. — Invasive species in penguin worlds: An ethical taxonomy of killing for conservation. *Conservation & Society* 9 (4): 286-298.
- WOLWERTZ A. 2016. — Espèces invasives: communes en 1^{re} ligne. *L'avenir.net* 25 janvier 2016. https://www.lavenir.net/cnt/dmf20160124_00769452/especes-invasives-com-munes-en-premiere-ligne, last consultation on 17 March 2021.

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