The Illegal Wildlife Trade: Through the Eyes of a One-Year-Old Pangolin (Manis javanica)

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Abstract: This paper explores the literature on the illegal wildlife trade (IWT) by following the journey of a single imagined Sunda pangolin (*Manis javanica*) through the entire trading process. Literature on IWT frequently refers to non-human animals in terms of collectives, species, or body parts, for example 'tons of pangolin scales', rather than as subjective individuals. In contrast, this paper centralizes the experiences of an individual pangolin by using a cross-disciplinary methodology, combining fact with a fictional narrative of subjective pangolin experience, in an empathetic and egomorphic process. The paper draws together known legislation, trade practices, and pangolin biology, structured around the journey of an imagined pangolin. At each stage of IWT, from poaching to consumption, the relationships between various actors are contextualized, helping to untangle the complex networks and relationships (both human-human and human-animal) involved in IWT. Concluding recommendations are made about ways to address IWT, including supporting locals in source areas, educating consumers, and improving law enforcement. It is hoped that this methodology will be applied to further studies of human and non-human animal interactions in this area of research, in order to individualize non-human animals and recognize their subjective experiences.

Keywords: pangolin, wildlife trade, CITES, egomorphism, anthrozoology, human-animal studies

Introduction

The pangolin climbs upwards, digging sharp claws into soft bark, tightly gripping the trunk of the tree. Encountering a sturdy side branch, her long, thick tail shifts sideways to keep balance, curling around the branch for support as she rests.

Behind her lies an old, deep hollow in the tree, reminding her of hazy early feelings of warmth and safety in her first burrow, endless twilight days riding on her mother's back through the dark forest, tails intertwined.

Moving smoothly on through the forest, she becomes aware of an unfamiliar smell: a stranger? She freezes to watch as a male emerges from the undergrowth, scales still wet from the evening rain. Tentatively, she allows him to approach, assessing the musky smell emerging from the base of his neck. She momentarily presses her side against him before they pass on.

The illegal wildlife trade (IWT) is one of the largest illegal international trades in the world, annually involving billions of pounds and hundreds of millions of individual plants and non-human animals (Karesh et al. S55). IWT is interconnected with other organized crime networks including weapons, drugs, human trafficking, and money-laundering (UK Government). CITES was initiated in 1975, in response to a call of action by the International Union for Conservation of Nature and Natural Resources (IUCN) to regulate international wildlife trade (Bowman et al. 82). Today, CITES provides a trade agreement involving 183 countries, which aims to protect more than 35,000 different plant and non-human animal species (Shepherd et al. 2). The World WISE database, which collates CITES data on IWT seizures, shows that nearly 7,000 different species have been seized, involving almost every country in the world (United Nations Office on Drugs and Crime [UNODC] 13), with East and Southeast Asia hotspots for wildlife harvesting. Mammals constitute over half of all seizures (Rosen and Smith 26), and one species which has been traded most prolifically is the pangolin, or scaly anteater (*Manidae spp*). Challender et al. found that between 2000 and 2013, there were at least 886 seizures involving pangolins in Asia,

equivalent to an estimated 227, 278 animals: 41% in the form of scales, 31% as live and dead whole animals, 26% as pangolin meat products, and the rest comprising skins or other products ('Understanding Markets' 252). This is likely to represent the tip of the iceberg, considering the secretive nature of IWT and the fact that much activity goes undetected and unreported (253).

Indonesia has experienced some of the largest seizures of pangolin shipments in history (Shepherd 7). One particularly large seizure in 2015 involved 96 live pangolins, 5,000kg of frozen meat, and 77kg of scales from Medan, North Sumatra (Wibisana and Nuning 196). Another seizure, in February 2019, involved 30 tonnes of live and dead pangolins and pangolin scales in Sabah ('Malaysia Makes Record 30-Tonne Seizure').The Sunda pangolin (*Manis javanica*), the only pangolin species found in Indonesia, is under severe threat from IWT and is currently listed as critically endangered by the IUCN Red List of Threatened Species (Challender et al. 'Manis javanica' 2019, 1). This is primarily due to intensified hunting for meat and scales, although in the past there was a considerable trade in leather made from pangolin skins (Challender et al. 'Manis javanica' 2019, 10). Despite various legal protections for pangolins under CITES (CITES, 'Doc 9.47' and 'Amendments to Appendices'; Challender and O'Criodain), between 1998 and 2019 IWT led to pangolin declines of around 80% (Challender et al. 'Manis javanica' 2019, 1). Pangolin trade now mostly involves meat, scales, and live pangolins typically destined for China and Vietnam (Challender et al., 'Manis javanica' 2019, 10). According to Chang, the economic development of China has resulted in the country becoming one of the largest wildlife markets in the world (71). Some of the drivers for the illegal trade include the lack of medicinal substitutes in Traditional Chinese Medicine (TCM), the preservation of traditional food preferences, and private consumption by wealthy and corrupt government officials (Chang 72).

It is important to note that the IWT has been linked to the outbreak of the novel coronavirus SARS-CoV-2, and the corresponding respiratory disease it causes, coronavirus disease 2019 (COVID-19) (Centers for Disease Control and Prevention [CDC]), declared to be a public health emergency of international concern by the World Health Organization

(WHO). The role that the IWT has played in the spread of the COVID-19 disease is unclear; however, coronaviruses have previously been found in wild animals, including pangolins (Liu et al. 979). At the time of writing, is thought likely that SARS-CoV-2 may have transferred from bats to humans, using pangolins as an intermediate host (Raza et al. 8; T. Zhang et al. 1346). In addition, the COVID-19 disease seems to have originated from Wuhan, Hubei Province, China, where there is a live animal market (Centers for Disease Control). In February 2020, the Standing Committee of the National People's Congress of China (2020) responded to the situation by issuing a complete ban on the consumption of wild animals, as well as increasing the penalties for being involved in these activities. The connection between IWT and the spread of human viruses such as COVID-19 is an additional reason to investigate and address the IWT. Despite the recent action taken to curb IWT in China, in the longer term it is likely that pangolin populations are experiencing dramatic decline, considering the magnitude of seizures and their long generation length (Challender et al. ''Manis javanica' 2014, 6). Increased restrictions have led to a rapid price increase for pangolins and their body parts (Challender et al. 'Understanding Markets' 256; L. Xu et al. 3), providing further incentive for the illegal trade to be continued. As pangolins are becoming increasingly and critically vulnerable to IWT, it is important to understand why and how this trade occurs.

This introduction is a demonstration of how illegally traded non-human animals are usually described in terms of collectives, species, or body parts, for example 'tons of pangolin scales'. Although this language can be useful in describing the scale of the problem, it also distances the discussion from individual non-human animals. It is reminiscent of terminology used by the animal agriculture industry, such as 'livestock', 'poultry', and 'cattle'. Such vocabulary removes individuality, and separates non-human animals from humans, helping to facilitate their exploitation. This is also seen in the language used in describing the action of trading, for example 'source country', 'transit', 'stockpile', and 'consumer', where each individual animal is positioned as a tradable product, an object within the landscape of human commerce. In 'The Sexual Politics of Meat', Carol Adams argues that this language positions animals as 'absent referents', where processes that

inherently involve violence towards non-human animals are described by language which deliberately removes the non-human animal itself. Adams draws parallels between the way non-human agricultural animals and women, both of whom are subject to systematic violence, are treated and spoken about in patriarchal 'Western' society. Violence towards animals and sexual violence towards women both involve the objectification and consumption of an absent referent, who through this process is stripped of their history and individuality (Adams). One way to dismantle anonymous nonhuman animal collectives is through biographies, which follow a single animal's life and subjective experience. One example of this is journalist Peter Lovenheim's *Portrait of a Burger as a Young Calf: The Story of One Man, Two Cows, and the Feeding of a Nation*, which follows the lives of two calves through their experiences in the animal agriculture industry, enabling the author to empathize with, and relate to, the calves as individuals. Tsovel argues that, despite Lovenheim's lack of specialist knowledge and the pro-farmer bias he developed during the study, his methods were pioneering in their persistence and narrow focus, contrasting with the generalized, non-individual treatment of farm animals in both scientific literature and animal welfare reports (246, 258). This paper aims to achieve something similar, challenging the dominant form of IWT discourse by highlighting and exploring the perspective and experiences of a single imagined pangolin through the whole IWT process. This will be structured around the pangolin's journey from her home in the 'source' country to her ultimate destination. As well as centralizing the pangolin, the linear, one-directional narrative of a journey will help to untangle the complexities involved, in response to the 'need to recognize the diversity of products, actors, network structures, and contexts that define IWT activities' (Phelps et al. 479).

Methodology

The complexities and motivations of human behaviour are often the focus in reporting on IWT. However, it is also important to find ways to understand the experiences of non-human animals, who have no voice with which they can represent themselves – at least not a voice which is understood or listened for by most humans. To counter this inequality, the fictional narrative of this paper will aim to raise the non-human animal experience to the forefront of our minds. In terms of inspiring empathy and relatability between the reader and an individual non-human animal, fiction is a helpful tool. Suzanne Keen describes how identifying with a fictional character can inspire empathetic responses in the reader, particularly when the character experiences negative emotions, even when the reader and character have very little in common (214). John Shoptaw uses a fictional narrative very effectively in his poem 'Pangolin Scales' which describes a wild pangolin in the Congo basin being handed to traffickers, transported to China, and consumed as a luxury product and as medicine (101-102).

Many literary animal studies critics argue that fictional animals should be represented as subjective selves who exercise autonomy and agency, rather than simply being used as a metaphor for human meaning (for example, Shapiro and Copeland 344). This perspective is summarized by Josephine Donovan:

> Animal-standpoint criticism (starts) from the premise that animals are seats of consciousness-subjects, not objects; that they are individuals with stories/biographies of their own, not undifferentiated masses; that they dislike pain, enjoy pleasure; that they want to live and thrive; that in short they have identifiable desires and needs, many of which we human animals share with them. ('Aestheticizing Animal Cruelty' 204)

The larger purpose of such fictional representations, argues Donovan, is to contribute towards an ontological re-placement of non-human animals within the world, so that in the future they will no longer be commodified and objectified to meet human needs ('Aestheticizing Animal Cruelty' 214). By adopting the perspective of an animal, Maha

Mostafa argues that we are less focused on our own human needs and more able to prioritize the 'interests, wants and suffering' of the animal subject (157). Kenneth Shapiro and Marion Copeland write that there should be a critique of the human-animal relationship within fictional works, not only in descriptive sense, but so that the relationship is '(placed) in the universe of possible relationships – from the animal as forgotten resource for a consumer (the steak, medium rare) to the animal as more or less equal partner in a relationship – the fruit of which is a common project, a shared world' (345). Donovan examines the human-animal relationship that is critically positioned by Leo Tolstoy in his short story 'Strider: The Story of a Horse', where animal subjectivity is sharply contrasted with the mercenary human treatment of animals as objects. After Strider, the eponymous horse, tells his life story in the first person to five other horses, Donovan notes that Tolstoy abruptly changes scene to describe the human owners discussing the economic value of their respective horses, 'juxtaposing the subjective point of view of the animals with the objective/commodifying view of the human masters' ('Tolstoy's Animals' 42-43). This paper similarly contrasts the subjective narrative of a wild pangolin with the broader, impersonal context of the mercenary human activity which is harming her. Overall, the paper aims to reposition the pangolin in the 'universe of possible relationships' (Shapiro and Copeland 345), from being considered an absent referent valued in monetary terms within IWT, to existing as an autonomous, subjective self who experiences the world in an intrinsically meaningful way.

In order to achieve the representation of animal as subject, it is important to understand the perspective and physicality of a non-human self. One way to attempt this is through 'egomorphism', a term coined by Kay Milton to contrast with anthropomorphism. Rather than projecting human characteristics onto other animals, egomorphism involves referring to one's own experiences in order to empathize with others, imagining the way we ourselves might feel in similar situations; whether physically or emotionally (Milton 255). Mostafa highlights how empathy and sensitivity is utilized by Bruce Cameron in his novel 'A Dog's Purpose' to depict a dog's agency, subjective experience, and emotions. Similarly, journalist Amy Lee utilizes empathetic language in the first paragraph of her article on pangolins: 'Currantlike eyes blinked and a pointy nose trembled inquisitively' (1142). By

introducing the reader to an individual pangolin, a mental representation of the animal and their experiences is created, providing some context and meaning to the statistics in the body of Lee's article. Another example is described by Elizabeth Costello, the main character in J. M. Coetzee's *The Lives of Animals*. Costello uses Ted Hughes' poem 'The Jaguar' as an example of how it is possible for a writer to '(feel) his way toward a different kind of being-in-the-world … (asking) us to imagine our way into that way of moving, to inhabit that body' (Coetzee 51). In Hughes' poem, the captive jaguar's 'stride is wildernesses of freedom: / The world rolls under the long thrust of his heel' (Hughes, lines 18-19). Paul Barrett draws a connection between Hughes' embodiment of the jaguar and Marc Bekoff's description of 'deep ecology' (133), where animals are understood through their own sensory and locomotive worlds, in order to imagine how it might feel to experience the world through another animal's reality (Bekoff 11).

In order to attempt to understand a pangolin's sense of 'being-in-the-world' (Coetzee 51), part of the methodology of this paper utilizes the author's own imaginative sensibility and empathetic capacity, which is informed and shaped by the factual detail of what is currently known about the IWT and pangolin biology (sources for the latter include: Chao et al. 'Pangolins in Ecosystems'; Chong et al.; Choo et al.; Lekagul and McNeely; Lim T-Lon; Gaudin et al., Tarmizi and Sipangkul; F. Zhang et al., 'Reproductive Behaviour'). By combining an empathetic fictional narrative with a technical overview, the aim is to gain a deeper insight into the harms caused to each pangolin through IWT, repositioning pangolins from objects that are sums of their body parts to subjects, with agency, feeling, purpose, and individuality.

To avoid speaking for the pangolin, an anthropomorphic internal monologue will not be used. We cannot know what other human or non-human animals are thinking, but we can, and arguably should, attempt to imagine what they might be feeling. For similar reasons, the pangolin will remain nameless. Although names are intrinsically linked to identity in many human cultures, the concept of a 'name' in this sense is not meaningful in the context of a pangolin's life. In Ursula K. LeGuin's story 'She Unnames Them' (27), Eve unnames all the animals which, according to the biblical story, Adam had named (Genesis

2:19-20). At the end of this unnaming, the animals 'seemed far closer to (Eve) than when their names had stood between us: so close that my fear of them and their fear of me became one… The hunter could not be told from the hunted' (27). By choosing to reject this anthropomorphism so widely used and familiar to us, it is hoped that the namelessness of this pangolin will similarly bring us closer to a real pangolin's experiences.

'Source': Her Home

Everything is dark and still as the pangolin silently descends to the forest floor. Lone ants scurry over her smooth scales, valiantly but ineffectively defending their nest. Her long, sticky tongue shoots out and draws a few insects back into a delicate, elongated snout.

At the base of the tree, she hears a snapping sound in the distance, and becomes aware of an unfamiliar scent; not pangolin, but something Other. She raises her head and inhales, pausing for a beat, then cautiously continues along her path.

A bright light flashes, alien and confusing in the night, blinding her into a tight, instinctive ball. Loud growling, then intense pain as jaws clamp around the base of her tail. Terror descends and the ground falls away. Her heart thumps wildly – there is no escape. Then she is in total darkness, unable to move, claustrophobic and tail-sore, the wound crushed with each bump at the bottom of a bag.

Sunda Pangolins

Sunda pangolins (*Manis javanica*) are distributed across Southeast Asia (see Figure 1) and inhabit primary and secondary forest, as well as cultivated areas near human settlements (Azhar). Pangolins are highly specialized to feed on ants and termites. They have prehensile tails and are capable tree-climbers (see Figure 2). Sunda pangolins give birth to single offspring and provide maternal care for three to four months after birth (Lim and Ng 7). They are elusive animals, due to primarily nocturnal, solitary behavior and increasing rarity

(Challender et al. 'Manis javanica' 2014, 5). Although there is a lack of quantitative population data, it is thought that the species is declining in many areas primarily due to unsustainable hunting and poaching, as well as factors such as lack of suitable prey and declining habitat (Chong *et al*. 101-102).

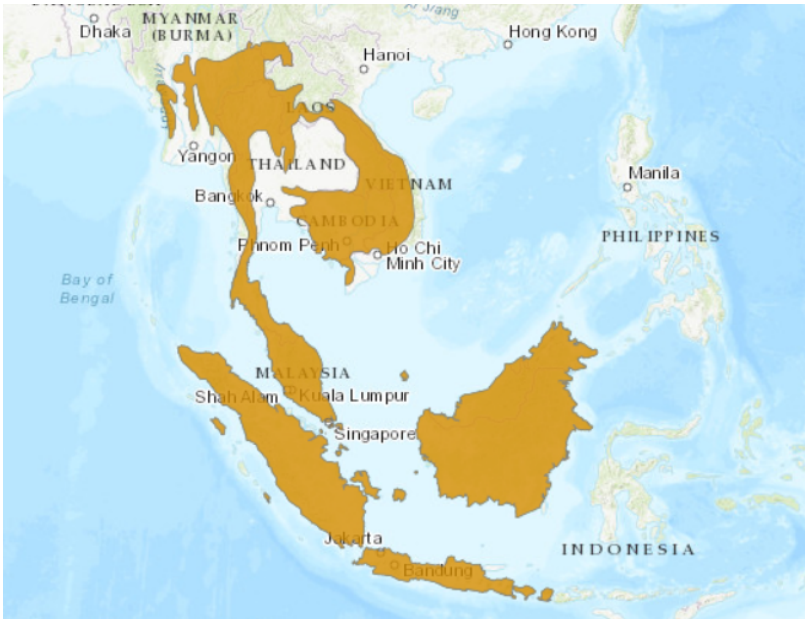

Figure 1: Distribution of the Sunda pangolin (Manis javanica) (Challender et al. 'Manis javanica' 2019).

The name 'pangolin' originates from the Malay word 'Peng-gulung', or 'the roller', which is inspired by the way pangolins roll into a ball when threatened (Lai 3). Their docility has been heavily exploited by humans, who are able to capture pangolins with ease. Lai explains that 'the genus name 'Manis' comes from the Roman religion for the word meaning 'spirit of the dead' or 'ghost' because of its secretive and nocturnal habits' (3). Lai goes on to declare that, 'if we do not act now, the pangolin will indeed live up to its name of being a spirit of the dead' (3).

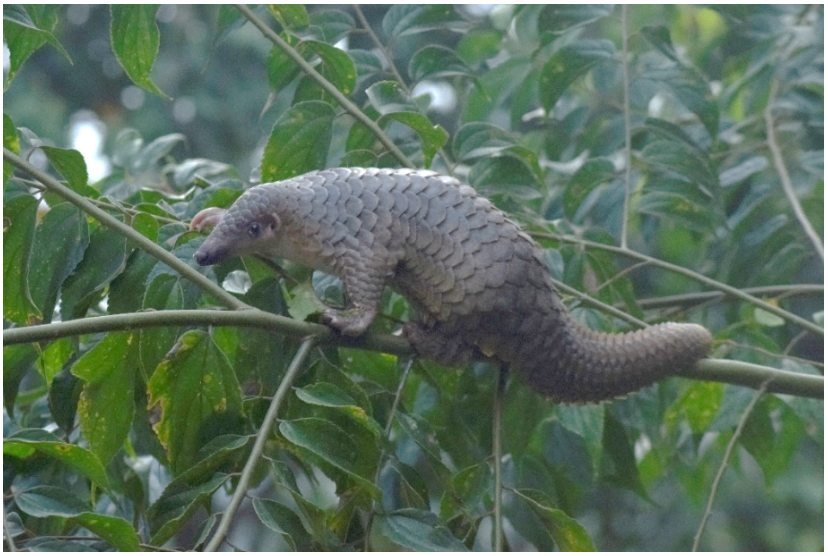

Figure 2: Wild Sunda pangolin (Manis javanica) tree climbing in North Sumatra (F. A. Irawan, 'Sunda pangolin Manis javanica'. Wikimedia Commons, 2019. <https://commons.wikimedia.org/wiki/File:Trenggiling_Sunda_Sunda_Pangolin_Manis_javanica.jpg> Accessed 11 Sep. 2020).

Hunter Profiles

In Indonesia, subsistence hunting of pangolins has probably been carried out for centuries (Shepherd 7) which means that many local people possess the skills and expertise necessary to capture them. The physical proximity of these communities to pangolin habitats facilitates hunting, while the remoteness of these areas frustrates the enforcement of anti-poaching laws (Rosen and Smith 27). It is believed that pangolins are still hunted for subsistence in parts of Kalimantan (Challender et al. 'Manis javanica' 2014, 7); however, this has largely been superseded by IWT due to the escalating monetary value of pangolins (Chong et al. 103). In 2009, Sandrine Pantel and Chin Sing Yun reported hunters saying that '(Pangolins) used to be very common, but nowadays there are no more pangolins in my area; everyone is looking out for pangolins because of their good price' (vii). Outsiders can also come from beyond the villages to hunt, which is either done at night using flashlights and/or trained

dogs, or in daytime, using smoldering hay to smoke pangolins from their dens (Sopyan 136). IWT can tempt those living in poverty by providing quick money (Chong et al. 103), and hunters often obtain loans from local collectors to cover their expenses (Sopyan 141). Gono Semiadi et al. describe how collectors pose as 'poor people saviors' (14), when in reality, locals are receiving insignificant payment compared to what collectors earn from the sale of the highly valuable wildlife.

Domestic Trade Laws

In 2009, Shepherd reported that Indonesia was considered by the CITES National Legislation Project to have sufficient domestic legislation to enforce CITES (7). However, Wibisana and Nuning argue that Indonesia's domestic and export markets could now comprise 'the largest crime scene of illegal wildlife trade in Southeast Asia' (166). Reasons for this include the weakness of protective laws and enforcement, and high profit gained from the trade, despite protections. Pangolins have been protected in Indonesia since 1931, under the Wildlife Protection Ordinance No. 266 (Challender et al. 'Manis javanica' 2014, 10). This protection was expanded in 1990, when the Conservation on Biodiversity and Ecosystems Law no.5/1990 became the primary legislation for the protection, conservation and use of wildlife (Semiadi et al. 13). Under this legislation, the minimum penalty for pangolin trafficking is up to USD 4000, and/or up to one year in prison, and the maximum is the same fine, but up to five years in prison (Challender and Waterman 57). Sunda pangolins received additional protection in 1999, under the Government Regulation no. 7/1999 on Conservation of Flora and Fauna (Challender et al. 'Manis javanica' 2014, 10) and, in 2009, by being added to the List of Protected Wildlife Species (Semiadi et al. 13). There are also regulations at the ministerial level specifically relating to the capture and hunting of wildlife for commercial and scientific purposes, captive breeding, and harvesting from the wild (Semiadi et al. 13).

There are several different institutions involved in enforcing these laws, including the Ministries of Forestry, Transportation, and Agriculture, the military, customs,

immigration, and public prosecutors (Wibisana and Nuning 198). Perhaps because there are so many different bodies with overlapping authority, lacking a centralized coordinating body, it is not always clear who should take responsibility for enforcement in a particular case (Wibisana and Nuning 198). Some arrests and convictions have been made, although the rate of punishment remains low; from 122 seizures between 2005 and 2015, 15 arrests were made and seven convictions, with fines between USD250-750 and prison sentences of 6-18 months (Challender and Waterman 57). According to A.G. Wibisana and W. P. Nuning, writing in 2018, no ruling relating to wildlife crime in Indonesia has ever given the maximum imprisonment of five years, with the highest to date being 4 years for trading tiger bones and a pelt (199).

'Transit': Her Abduction

The ground is swaying. It is unbearably cramped, and the scent of death and the dying drifts through the air. She has been curled in a ball for days, but it is forced and painful – not safe and comfortable, as it should be.

She is hungry, afraid, and dirty with her own excrement. Her tail throbs heavily and incessantly, but she is unable to clean the wound. There is a strange, painful itchiness underneath her scales, but she cannot stretch or rub her back. Time is endless and cruel…

Transportation methods

Although IWT often operates under the cover of legal trade, for example with forged CITES permits, the zero export quotas in place for pangolins force the illegal pangolin trade to use other methods (UNODC 21-23). There are thought to be two main trade channels to China. Dead pangolins and scales (see Figure 3) tend to be transported by sea in large quantities, in steel or wooden fishing boats, or speedboats, often disguised as frozen fish, whereas live pangolins are usually smuggled across land and are sometimes hidden within other cargo (Geng 78; L. Xu et al. 7). Scales are often traded separately, delivered using

trucks or postal services (Geng 78). Once inside China, pangolin products are transported using 'long-distance public buses, private cars and motorcycles, or via courier and logistics companies' (L. Xu et al. 7). One single slaughterhouse can be supplied by a number of surrounding regions, some processing a monthly volume of over 300-400 pangolins (Sopyan 140). However, pangolins are often transported live because they are sometimes presented alive in restaurants before being killed for the meal (UNODC 67). This is likely to be a traumatic and painful journey, as they are commonly transported en masse, tied tightly inside net bags in a curled-up position, commonly causing tail wounds (Clark et al. 112; Sparrow 127). This prevents food and water being provided to individuals, and often results in the pangolins arriving to their destination covered in faeces and urine (Clark et al. 112).

Figure 3: Pangolin scales during seizure in Cameroon
(K. Cameron/US Fish and Wildlife Service Headquarters).
'Pangolin scale burn in Cameroon'. Wikimedia Commons, 2017.
<https://commons.wikimedia.org/wiki/File:Pangolin_scale_burn_in_Cameroon._Credit-_Kenneth_Cameron_-_USFWS_(2)_(32575640450).jpg>
Accessed 11 Sep. 2020.

Because they are transported in close proximity, in poor health and treated roughly, 'Pangolins have been found to carry heavy parasite burdens, traumatic wounds (mainly from snare trap and dog bite wounds), abrasions, ocular ulceration and severe dermatitis beneath the scales' (Clark et al. 111). Bacterial dermatitis is caused by dirty transport containers, or heavy soiling by their own faeces, and parasites include ticks and gastrointestinal worms (Sparrow 127; Clark et al. 114). Having arrived at their destination, pangolins are commonly force-fed, or injected with substances such as gypsum powder, yam powder, and cornflower mixed with water underneath the skin, to increase their weight and, therefore, sale value (Clark *e*t al. 112; L. Xu et al. 7).

Intermediaries

Modern IWT routes have been described as 'sophisticated and extensive' (Challender et al., 'Manis javanica' 2014, 8). Once 'harvested', pangolins are sold to small local collectors who transport the animals to larger collectors (Semiadi 14). Intermediaries visit villages regularly, sometimes setting up buying stations to purchase pangolins from local hunters (Shepherd 7). Sopyan describes how pangolin traders use legal businesses such as bakeries and grocers to cover up illicit activities (139). Either pangolins are immediately slaughtered and mislabeled as legal products, or they are directly transported to larger towns in disguised vehicles or on public transport (Sopyan 139). Local traders can receive financial support from the regency or provincial level traders, who receive investment from slaughterhouses (Sopyan 141). Some intermediaries are more distantly involved, making financial or logistical arrangements, or colluding with government officials (Phelps et al. 482). Ultimately, the highest-level collectors sell their pangolins to well-connected exporters, who have developed an international network of contacts, including within the police, army, and governments (Sopyan 142).

Geng describes the complex network of criminals, 'organized in a group capable of smuggling, selling, transporting, storing, packaging, delivering and purchasing protected species. The group is strongly organized, with definite task assignment, stable demand and supply' (78). IWT actors are usually specialists and most seizures involve one species, rather

than mixed commodities (UNODC 15). Due to the practiced and organized nature of the trade, there are several different key routes and methods used to transport pangolins across international borders. Only a fraction of harbors in Indonesia are official international harbors with sufficient measures to combat wildlife smuggling (Semiadi et al. 15). Transactions often take place in the open ocean, where they can be disguised as fishing activities. If law enforcement officers receive tip-offs, checkpoints can be implemented; however, the irregular nature of this type of enforcement is problematic (Semiadi et al. 15). It is important to note that organized crime does not only mean mafia-style groups, but any type of patterned criminal activity motivated by profit (UNODC 23). IWT actor profiles are heterogeneous and changeable, as people are motivated by different cultural and financial reasons, have differing levels of involvement, and are from different socioeconomic and educational backgrounds (see Phelps et al. 481 for a typology of actors). Perceived levels of risk also affect IWT involvement, as do potential gains and levels of trust with other actors (Phelps et al. 484).

CITES

Michael Bowman et al. argue that CITES is the most successful international treaty designed to conserve wildlife (484). CITES operates by listing species which are endangered or traded excessively into three different Appendices. The treaty prohibits international trade of species threatened with extinction (Appendix I) but enables a restricted trade of species which could become threatened with extinction if trade was uncontrolled (Appendix II). Furthermore, if a country has domestic legislation regarding the export of a species that is not listed in either Appendix I or II, they may seek support from other countries in enforcing such legislation (Appendix III). Non-compliance with CITES can result in other parties restricting trade with the non-compliant party. As this can have severe economic consequences, it is a strong incentive to promote compliance (UNODC 24). However, CITES is not designed to prevent wildlife trade, but to regulate trade and ensure sustainable use of wildlife (CITES, 'Strategic Vision' 1). From a green criminological perspective (see

Sollund) this should be viewed critically since, by permitting a legal trade, CITES enables harms to be inflicted on large numbers of animals.

Indonesia enforces CITES regulations through a structured wildlife import/export permit system, implemented by the Indonesian CITES Management Authority and the CITES Scientific Authority (Semiadi et al. 13). These authorities collaborate to monitor wildlife utilization, control inter-island wildlife traffic, assess populations, and recommend appropriate quotas. Indonesia has taken an unusual further step by implementing quotas for non-listed look-alike species to combat laundering of endangered species through legal channels (Semiadi et al. 13). However, enforcing CITES at a domestic level often relies on under-trained and under-resourced officials, hampering compliance and enforcement (Bowman et al. 534).

When it was first suggested (and subsequently rejected) in 2000 that pangolin species should be moved to Appendix I, it seems that the potential for an imminent trade ban was actually a catalyst for trade, with a trade peak that can be seen in 2000, despite the zero export quotas established that year for Asian pangolins (Challender et al., 'Understanding Markets' 252). This may be because the zero export quotas were a proxy, not requiring import permits to be issued by importing countries, which resulted in little attention being paid by CITES to Asian pangolins when these species were arguably particularly vulnerable (Challender and O'Criodain 314). It was not until 2016 that all species of pangolin were transferred to Appendix I (an amendment opposed only by Indonesia: Challender and O'Criodain 312); in the meantime, this caused a rise in the legal trade of African pangolins, which was not subject to zero export quotas (Challender and O'Criodain 311). Harrop argues that regulatory controls for IWT are too slow to adapt to the pace that species are being driven to extinction (xxxviii). Although it has worked to coordinate a united effort in trade controls across borders, CITES has not prevented the unsustainable trade in pangolins (Challender and O'Criodain 314). Large seizures have been made since pangolins were moved to Appendix I, indicating that the change in status has not had a short-term positive effect; the longer-term effect will become clearer over the coming years (Challender and O'Criodain 315).

'Destination': Her Captivity

Instead of sinking into soft, leafy forest debris, her claws click and scratch across the hard ground. Completely exposed, she has no cover from the harsh light or the discordant noise: both are unending and unchanging. She feels a profound sense of loss: of her forest home, of her freedom, and of the agency to direct her own life.

Her stomach aches and itches inside. On the worst days, they hold her down, piercing her body with something sharp; vulnerable, she curls into a ball, but her muscles have grown cramped and tired. She struggles to soothe herself; the pain does not result from her own actions, and she does not know how to avoid it.

Consumption

Figure 4 (left): 'Examples of Pangolin Scale Products Seized by the Hong Kong Government'. US Government Accountability Office. Wikimedia Commons, 2017. https://commons.wikimedia.org/wiki/File:Examples_of_Pangolin_Scale_Products_Seized_by_the_Hong_Kong_Government_-_Hong_Kong%E2%80%99s_Agriculture,_Fisheries_and_Conservation_Department_Visitor_Center_(37610617496).jpg Accessed 11 Sep. 2020.

In China, pangolin-derived products are mainly destined for restaurants and traditional medicines (see Figure 4). Zhu and Zhu highlight the importance of wildlife consumption to TCM, emphasizing that food and medicine are rarely characterized separately (as they are in the West); instead everything ingested is relevant to health (2). Therefore, some consumption of exotic species in China is arguably often less to do with 'conspicuous consumption' and more to do with maintaining a healthy lifestyle. Until recently, pangolin scales have been included in the Pharmacopoeia of the People's Republic of China, with the reported function of increasing blood circulation, reducing swelling, increasing lactation in women, and expelling pus (Chinese Pharmacopoeia Commission, in Jin et al. 1; L. Xu et al. 1).

In a review of 15 articles assessing the use of pangolin scales in TCM, Jin et al. find that there was no reliable evidence that pangolin scales had any medicinal value (6). However, Zhu and Zhu emphasize the importance of being sensitive to Chinese culture and traditions in tackling IWT, arguing that Western interventions must not embody 'cultural imperialism and ignorance' (3), but instead take a strategic and specific approach to addressing IWT. One article from 2016 articulates the sensitivity to Western interference: 'Beware of the West attacking traditional Chinese medicine under the name of wildlife protection' … 'we should not ignore our cultural background and blindly adopt Western values' (Wen et al. in Zhu and Zhu 3). Zhu and Zhu argue that in some parts of the world, wet markets are of equivalent importance to supermarkets in the West, and exist to supply fresh produce for a healthy lifestyle, with most markets trading only in domesticated animals (3). Setting animal welfare issues aside, Zhu and Zhu argue that recent calls by Western countries (such as the United States and Australia; Mukpo) to shut down all wet markets in response to the COVID-19 breakout at the Wuhan wet market are misdirected, focusing on a symptom of the wildlife trade rather than its cause. Instead, increased regulation with international oversight is recommended as an appropriate and culturally sensitive mitigation measure, as a compromise between different cultural perspectives and ways of life (Zhu and Zhu 3).

However, work can still be done to educate consumers about the harm of purchasing illegally traded wildlife. Two studies using different methodologies found that only a few years ago scales were available in most retailers: 69% in 2012, 80% in 2013, and approximately 62% in 2016 (Challender et al., 'Understanding Markets' 254; L. Xu et al. 2) L. Xu et al. found that the price for wholesale and retail pangolin products between 2006 and 2016 increased almost four-fold (USD132/kg to USD153±138/kg) and six-fold (USD160/kg to USD501±155/kg) respectively (3), and Challender et al. ('Understanding Markets') report an even larger price increase from 2000 to 2012-13 (255). It is thought that this is not only driven by increased wealth and new luxury urban markets for conspicuously consumed pangolin products, but also reflects the dwindling supply and increased in risk for retailers and wholesalers in selling pangolin products illegally (Challender et al., 'Understanding Markets' 255).

Criminal Groups

Pangolin trafficking is profit-driven, but carries less risk of severe punishment than other major illegal trades. Detection is avoided by employing unknowing and unconnected actors, such as drivers, who cannot be prosecuted; selling goods to a few, trusted clients; and the physical absence of criminal leaders while goods are transported, stored and sold (Geng 77). Pangolins are also sold online on retail and TCM websites (L. Xu et al. 3), although new technological methods such as machine learning could be applied to detect online marketing and sales of illegally traded wildlife on social media platforms (Q. Xu et al. 8). In addition, governmental access in China to online websites and social media platforms has helped to identify occurrences of IWT (Chang 73).

Domestic Law

China has been a member of CITES since 1981 (Chang 72). In 1996, China's population of wild pangolins were deemed to be commercially extinct, meaning that China became dependent on imports from Southeast Asia (Challender et al., 'Understanding Markets'

250). From 2007, the only permitted use of pangolin scales was for recognized clinical applications (L. Xu et al. 1). In practice, this meant that legal pangolin imports were still being used in approximately 700 hospitals and around 70 patented medicines (L. Xu et al. 1). From 2008 to 2015, the average annual consumption of legally traded pangolin scales in China was 26,600 kg (L. Xu *et al*. 7). However, the legal trade ran parallel to an underground illegal trade. Between 2007 and 2016, 209 seizures of pangolins were made by law enforcement agencies in mainland China, Hong Kong, Macao, and Taiwan (L. Xu et al. 5). In the second half of this period, the average annual seizure numbers were almost three times higher the first half, which may either be due to an increase in trade and demand, or in the improvements in law enforcements and transparency of seizure reports (L. Xu et al. 5). To increase compliance with CITES, from 2013 China increased measures to prevent wildlife trafficking and strengthen law enforcement. For example, in 2013 and 2014, collaborations between Asian, African, and North American countries (known as 'Cobra' operations) resulted in significant numbers of seizures and arrests, including 170 kg pangolin scales (Chinese State Forestry Administration in Chang 72). Additionally, the purchase of wildlife products known to be protected under state law was made a criminal act in 2014, in recognition of the role consumers play in driving the trade (Chang 73).

Between 2005 and 2015, the minimum and maximum penalties in China for pangolin trafficking were up to 5 years and life imprisonment respectively, the latter being the most severe punishment of this crime in the world (Challender and Waterman 57). However, out of 222 seizures during this time period, only one arrest was made and this did not result in a conviction. Legislation was strengthened with the Wild Animals Protection Law 2016, which requires source documentation for any legal wildlife trade, prohibits the trade, advertisement, and purchase of national protected wildlife, and requires international communication and collaboration in line with China's CITES obligations (Chang 74). Since implementing this law, instances of trafficking in China which were not previously treated as crimes are now being punished more severely, for example with periods of incarceration (Chang 73). In 2018, in response to the enabling nature of the legal wildlife trade on IWT, the commercial (legal) import trade in pangolins became banned in China (State Forestry

and Grassland Bureau). In response to the global COVID-19 pandemic, which has been connected to wildlife consumption, from June 2020 China has elevated the pangolin's status to a first-class national protected animal (State Forestry and Grassland Bureau), and removed pangolin scales from the 2020 edition of the Chinese Pharmacopoeia (Jin et al. 1). Over the last few years, China has made considerable progress building a legislative framework and international collaboration to address IWT. However, enforcement of these laws, as well as reducing consumer demand for IWT products, is key to this framework being effective.

Tackling the Illegal Wildlife Trade

The pangolin is moved to a new, quiet place. She is single-minded and focused, moving steadily alongside the metal fence. At the corner she does not lose pace, but smoothly turns around and walks back the way she came.

Her fear is gradually being replaced by a slow, sad emptiness. She is lost, unable to sense the ever-changing dynamics of her vast and familiar forest home. There is a male pangolin here, but he is old and disturbed, faded scales falling from his back. She draws near, craving comfort and closeness; but he lashes out in confusion, leaving a thick, ugly scar across her soft belly.

To pass the time, she pushes her head or paws through the fencing, forth … and back … and forth. There is no escape, and it is painful, but the repetition is reassuring and controlled.

Confiscating Goods

Animals confiscated from IWT are usually taken to rescue centers, or returned to their home country, both potentially causing trauma or death (Bowman et al. 529). Reintroducing confiscated animals in poor physical condition to the wild risks spreading disease to populations of species already vulnerable (Clark et al. 116), so euthanasia is sometimes the chosen option (Bowman et al. 529). Rescue centers also prove problematic; pangolin life expectancy within captivity is usually short, with high mortality rates after one

or two years due to specialist dietary requirements, among other factors (Challender 96). Stress-induced clawing behavior is exhibited by many captive pangolins, who 'rapidly (put) their forelimbs and head backwards and forwards through the fencing. This behavior has caused superficial wounds to the noses and claws' (Challender 97). Pacing also occurs, even in large enclosures (Challender 99), which is not surprising considering the natural home range of the Sunda pangolin can cover an area of 6.97ha to 41.3ha (Lim T-Lon xi).

Reducing Demand

CITES has been criticized for ignoring some of the socio-economic drivers that cause IWT, including economic necessity, market demands, and longstanding cultural practices. While these factors are recognized by CITES, they tend to be excluded from decision-making, monitoring and implementation, and trade controls are favoured as the most important mitigation (Challender et al., 'Understanding Markets' 250; Challender and O'Criodain 306). However, trade controls alone have to date been insufficient in curbing the underground trade in pangolin products. Zhu argues that the speculative value of wildlife products contributes to their demand, particularly in the context of China's growing issue of capital overaccumulation (277). Challender et al. ('Understanding Markets') suggest business-led social responsibility commitments to reduce consumer demand for pangolin meat (256). It is important that demand reduction strategies are not perceived as being manipulative, and are instead sensitive to long-held, culturally ingrained beliefs, values, and behaviours (Burgess et al. 351).

Improving Enforcement

It is generally agreed that laws and treaties designed to combat IWT require more systematic enforcement (Challender et al. 'IUCN 2014' 10), and improved collaboration between and within countries (UK Government). One of the main issues in enforcing CITES laws is lack of capacity, including equipment and expertise, and officials at trading hubs would benefit

from better education about IWT and training in identifying protected species (Gomez et al. vi). Technological and scientific advances have brought forth new tools in combating wildlife crime. One example of this is 'gelatin lifting' which is thought to be an inexpensive and effective way of lifting fingerprints from pangolin scales (Moorat et al.). However, resources and training will be essential for any new techniques to be effectively implemented. As IWT is seen as an environmental crime, it is often not taken seriously (UK Government). Lalita Gomez et al. recommend that the judiciary should be better informed about the impacts of IWT and the need for effective prosecutions (vii). Increased communication and collaboration are also important, and Jiwen Chang advocates for greater interdepartmental, interregional, and international co-ordination, within and outside China (77-78).

It may also be possible to undermine large scale criminal trafficking organizations by addressing the financial aspect of the crime. Cathy Haenlein and Tom Keatinge highlight the fact that wildlife trafficking is often a predicate offence to money laundering and can in some places be addressed under economic crimes legislation, which tends to result in more severe punishments (vii). Jonathan Winer and Trifin Roule advocate the use of financial intelligence and banking mechanisms to reduce the flow of money used to carry out logistical operations, as well as removing the financial incentives for corrupt officials (165). Other methods include stripping perpetrators of the proceeds of their crimes and conducting parallel inter-sector financial investigations, for example the financing of bail payments (Haenlein and Keatinge viii).

Supporting Locals

Globally, indigenous people rely on wild resources for 25-40% of their annual income (IUCN). However, local people involved in IWT generally see only a very small proportion of the eventual retail price (Cooney and Abensperg-Traun 301). Rosie Cooney and Max Abensperg-Traun advocate for a sustainable use approach to conservation, encouraging locals to steward their natural resources, rather than an alienating 'fences and fines' approach (302). Programs encouraging people to invest in their natural resources can result

in conservation and economic benefits (Rosen and Smith 30). Stuart Harrop describes a number of sustainable management practices traditionally used by some indigenous and rural communities in their utilization of natural resources, including establishing taboos or sacred areas, and allocating proprietary responsibility to particular individuals in society (xxxviii-lxxx). Although these methods were largely superseded by European law during colonization, Harrop highlights the importance of taking customs and 'cultural memories' into consideration for an effective and integrated conservation strategy (xxxviii-lxxx). It has been suggested that existing international law instruments designed to protect indigenous people's human rights could be utilized to build relationships with local communities and aid conservation and IWT control from the ground (Harrop).

In addressing wildlife crime among the Katu ethnic group in Vietnam, Douglas MacMillan and Quoc Anh Nguyen recommended community and pension payments, social marketing for awareness of wildlife law, subsidies for health and education services, and paying trappers to provide a community ranger service (311). However, although economic development can reduce poverty, and therefore the incentives for poaching, it can also enable IWT by providing access to previously inaccessible wildlife areas, for example by building roads (UNODC 19). Development can lead to habitat loss, exacerbating population declines and sometimes even posing a greater threat than poaching (UNODC 19). Economic growth in destination markets can also drive demand for luxury wildlife products (UNODC 19). These factors should all be taken into consideration. The importance of local involvement also applies to importing countries. Article 5 of China's Wild Animals Protection Law 2016 encourages the involvement of citizens and non-governmental organizations (NGOs) in wildlife protection, through donations, subsidies and volunteers (Chang 74). Chang argues that this will help enforcement, filling the gaps left by insufficient regulatory capacity and personnel (74).

Conclusion

She never meets another pangolin again. She never discovers what it is to be a mother, to feel a baby curl its fragile tail around her own. There are no new scent trails to follow; no fresh branches to bow down under her weight; no new possibilities. Her world is predefined and repetitive, a small space enclosed by an unmoving boundary, deprived of life.

She gradually slips into the hollowness of her new existence, slowly, so slowly, gently becoming submerged in her isolation. Time stretches out, monotonous and dull until, one day, indistinguishable from any other day, she quietly and numbly creeps into a corner, unnoticed by the world.

Finally, she succumbs; to sadness, exhaustion, and to death.

This paper has explored the complexities and heterogeneity of IWT by representing the journey and experiences of an individual pangolin. Through this lens, the characteristics and motivations of human actors involved in IWT have been investigated, as well as the nature and effectiveness of domestic and international wildlife legislation. Most importantly, it has centered on the traumatic and prolonged experience of thousands of non-human animals traded every year. Through a fear of anthropocentrism, scholars of IWT usually avoid directly addressing the possible experiences of non-human animals, a fact which only serves to enable their exploitation by distancing ourselves from them. However, this paper has demonstrated that illegally traded animals can be represented as autonomous, feeling subjects in parallel to a criminological overview of illicit human trading activities. This can be best achieved through careful research, by taking the time to consider in detail the physicality of a very different body, with different senses, and different priorities. Despite these differences, humans and pangolins do share some similarities – we know what it is to have a body, a mother, a home. I believe we also share the capacity for joy, fear, and loss, although we may experience these feelings in different ways. The empathetic process can be uncomfortable and painful, and it is much easier to disengage with the real experiences of non-human animals by speaking in terms of figures and collectives. However, it is essential that we engage our emotional intelligence in parallel with our intellectual intelligence, in

order to gain a deeper understanding of the reality of harmful everyday interactions between humans and non-humans, such as those within IWT. The use of fiction is one way of achieving this, by appealing to the reader's innate empathetic capacity to interpret and assimilate a non-human animal's perspective, while maintaining the breadth and scale provided by quantitative analysis.

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