Convivial Conservation from the Bottom Up: Human–Bear Cohabitation in the Rodopi Mountains of Bulgaria

Article *in* Conservation and Society · January 2021

DOI: 10.4103/cs.cs_208_20

CITATION
1

READS
6

3 authors, including:

Robert Fletcher
Wageningen University & Research
107 PUBLICATIONS **3,182** CITATIONS

SEE PROFILE

Conservation and Society AOP: 1-12, 2021

Special Section: Exploring Convivial Conservation in Theory and Practice

Convivial Conservation from the Bottom Up: Human-Bear Cohabitation in the Rodopi Mountains of Bulgaria

Svetoslava Toncheva[a,#], Robert Fletcher[b], Esther Turnhout[b]

[a]Institute of Ethnology and Folklore Studies with Ethnographic Museum, Bulgarian Academy of Sciences, Sofia, Bulgaria

[b]Wageningen University and Research, Wageningen, The Netherlands

[#]**Corresponding author. E-mail**: svetahet@abv.bg

Abstract

This article describes a case of human-bear cohabitation in the Rodopi mountains (Yagodina-Trigrad area) of Bulgaria. The lack of protected areas in the region and the increasing number of brown bears (*Ursus arctos*) have resulted in both human-wildlife conflicts and the development of mechanisms and practices to facilitate cohabitation in the absence of formal rules to regulate coexistence of human and nonhuman species. However, these mechanisms and practices are currently undergoing transformations due to newfound protection of the species under national and EU legislation, respectively. The paper explores these dynamics through a case study of relatively successful cohabitation in the region. Our analysis identifies and outlines local adaptation and conservation mechanisms developed to live with bears as well as strategies to benefit from the bears' presence. In this way, the study contributes to current debates concerning how to best facilitate 'convivial conservation' promoting coexistence between humans and wildlife by identifying factors in this case that have facilitated a bottom-up approach to cohabitation that might be tested or adopted for use in similar situations elsewhere.

Key words: convivial conservation; human-wildlife conflict; coexistence; ecotourism; postsocialism; bears; traditional ecological knowledge; Bulgaria

Abstract in Bulgarian: https://bit.ly/2Wv9jPf

INTRODUCTION

This article presents a case study of human-bear interaction in the Rodopi mountains of Bulgaria, which we argue represents an unusual instance of relatively successful cohabitation characterised by locally developed strategies for living together with bears. Bears have an ambiguous position here in terms of conservation: while they are formally protected by Bulgarian and overarching European legislation, many live outside of strict Protected Areas (PAs) and therefore occupy overlapping space with people. The specific context of postsocialism (Dorondel 2016) has necessitated largely bottom-up initiatives rather than imposition of approaches formulated by external conservationists, as in the majority of conservation cases globally (Fletcher 2012). Consequently, the case can be characterised as a form of 'constitutionality' emphasising 'local agency and creativity in the construction of novel institutions to deal with environmental issues' (2016: 69). This dynamic is illustrated in particular by strong reliance on Local Ecological Knowledge (LEK) and use of ecotourism as a key conservation strategy, which unlike in many other cases where the activity is introduced by outsiders (Fletcher 2009), is understood here by locals as their own initiative. The present study thus contributes to a growing body of research exploring the potential for convivial conservation to facilitate human-wildlife coexistence in the Anthropocene by investigating a case of bottom-up constitutionality wherein

Access this article online	
Quick Response Code:	Website: www.conservationandsociety.org.in
	DOI: 10.4103/cs.cs_208_20

people and animals have adjusted to living together in a context of limited state oversight.

The study also contributes to research concerning human-wildlife conflict and coexistence. Large predators are commonly seen as a major challenge for conservation due to such factors as damage to domestic animals and crops and direct threats posed to human life (Treves and Karanth 2003). Yet preservation of such predators is also commonly a central conservation objective due to their status as keystone species, attributed with regulating other species' population density and hence producing trophic cascade effects (Van Valkenburgh and Wayne 2010). The majority of research concerning how to facilitate large predator conservation has until recently focused on human-carnivore conflicts and their potential prevention, rather on understanding mechanisms facilitating successful coexistence (Frank et al. 2019; Hodgson et al. 2020).

In conservation practice, addressing human-wildlife conflict usually occurs within PAs by wildlife agencies that work to prevent conflicts (Treves and Karanth 2003) or through reliance on externally-funded compensation schemes (Dickman et al. 2011). However, research concerning alternative ways to manage or prevent conflicts where people and nature coexist outside of formal protected areas has been less apparent. Frank and Glikman assert that "[f]uture research should showcase coexistence and tolerance" to highlight "positive attitudes/behaviour and explore factors (i.e., values, culture and location of residence) that foster positive psychological dispositions and coexistence towards wildlife" (2019: 14). The present study responds to this call by exploring a case in which local residents have learned to coexist with bears within an overlapping space. The factors responsible for this situation are relevant for understanding how to encourage human-wildlife coexistence more broadly. While the role and perspective of the wildlife in question is of course important in explaining such dynamics (Boonman-Berson et al. 2019; Ampumuza and Driessen 2020), addressing this is beyond the scope of this paper and hence has been explored in a complementary one (Toncheva and Fletcher 2021). In the following analysis we therefore focus on the humans' approach to negotiating interactions with bears.

We begin by situating our analysis within the growing discussion of the potential of *convivial conservation* to foster human-wildlife coexistence through broader socio-economic transformation (Büscher and Fletcher 2019, 2020). We highlight our contribution to this discussion in exploring underexamined processes of bottom-up convivial programming through synthesis with a constitutionality perspective. We then explain the methods used in this study. Following this, we describe the particular context of our case within postsocialist Bulgaria. We then outline and analyse the various strategies that contribute to human-bear cohabitation in this context. We finish by highlighting the implications of our study for investigating and facilitating similar processes of what Haller and colleagues (2020) elsewhere term 'convivial constitutionality'.

TOWARDS CONVIVIAL CONSTITUTIONALITY

Discussion of convivial conservation arose in response to growing debate around assertions that we have entered a new geological epoch – the Anthropocene – in which human action and institutions increasingly dominate the planet (Lorimer 2015). For some, this assertion has evoked a sense of urgency to strengthen conservation efforts through enforcement and expansion of protected areas (Weurthner et al. 2015; Wilson 2016) or via market-based instruments (Kareiva et al. 2012). Others, however, have used it to rethink the very category of nature and specifically to question the dichotomy between culture and nature central to the global conservation movement historically (Brockington et al. 2008; Lorimer 2015). Overcoming this dichotomy implies accepting the fundamental entanglement of humans and nonhumans and thus understanding "natural" areas as the consequence of co-production by both (Haraway 2016; Lorimer 2015). The notion of conviviality takes this perspective in training critical reflection on how humans and nonhumans can live well together and cohabit overlapping spaces (Hinchliffe 2007; Turnhout et al. 2013; Büscher and Fletcher 2019, 2020).

Building on such discussions, as well as Ivan Illich's (1973) exploration of conviviality as a project of societal reconstruction more broadly, Büscher and Fletcher (2019, 2020) propose convivial conservation as a strategy to transcend beyond both strict protectionism and market engagement. This proposal resolves into three main principles: developing 1) conservation spaces that integrate rather than separate humans and other species; 2) direct democratic governance arrangements that challenge elite technocratic management; and 3) novel finance arrangements that seek not to commodify conserved resources but instead redistribute existing wealth and resources.

Thus far, the convivial conservation proposal has primarily been promoted for global policy discussions and adoption by international organisations (Büscher and Fletcher 2020). While the approach explicitly acknowledges cases embodying aspects of the approach in diverse local initiatives (ibid, 149), cases of this sort have not been systematically analysed in relation to the core principles previously outlined. And while micro-level human-nonhuman interactions have been previously explored from the perspective of conviviality more generally (Hinchcliffe et al. 2005; Hinchcliffe 2007), these studies have largely neglected attention to the wider political dynamics within which such interactions are embedded. In response, Haller and colleagues (2016) advance the concept of constitutionality to emphasise 'community members' views on participation, the strategies they employ in negotiating such initiatives, and the extent to which they can develop a related sense of ownership in the institution-building process for common pool resource (CPR) management' (p. 68). They argue that successful constitutionality commonly encompasses several preconditions including an: '1) emic perception of need of new institutions, 2) participatory processes addressing power asymmetries, 3) preexisting institutions, 4) outside catalysing agents (fair platform), 5) recognition of local knowledge, and

6) higher-level state recognition' (ibid., 80). Combining a constitutionality perspective with the convivial conservation principles previously outlined offers a novel and productive lens through which to explore community-led initiatives in terms of their potential to enact forms of 'convivial constitutionality'. While Haller et al. (2020) propose this in introducing the composite concept, they do not elaborate on how the two frameworks can be brought together in a synthetic analysis as we do herein. Within this synthesis, Haller and colleague's (2016) elements of constitutionality can be cross-referenced with Büscher and Fletcher's (2020) principles of convivial conservation. The integrated framework can then be used to assess the relative success or challenges faced by efforts to cultivate conviviality in human-nonhuman relations at the local level by evaluating such efforts in terms of criteria for just and effective conservation and for bottom-up commons governance simultaneously.

A central element of the convivial conservation proposal is promotion of human-wildlife coexistence (Büscher and Fletcher 2020; see also Turnhout et al. 2013). Coexistence, or cohabitation, has been promoted more widely within conservation discussions to shift focus away from an historical focus on human-wildlife *conflict* (Frank et al. 2019). Cohabitation presumes that humans and wildlife can peacefully share a common space (Hinchliffe 2007). The term also challenges *management* as a problematic category legitimising human control over other species (Boonman-Berson et al. 2016). In discussions of human-wildlife conflict, for instance, two main solutions to conflict management are offered: 1) modification of animals' behaviour (often by radical measures, such as killing); and 2) prevention of activities that overlap in space (e.g., by fences, zoning, relocation, etc.) (Treves and Karanth 2003; Hodgson et al. 2020). The emphasis is thus frequently on management of animals rather than management of people, who are often a (if not *the*) major factor in such conflicts (Margulies and Karanth 2018; Frank et al. 2019). Moreover, such approaches rely on establishing problematic boundaries between humans and other species. To move beyond such approaches thus requires a new 'politics of conviviality' emphasising practices of mutual adjustment and learning to live together (Turnhout et al. 2013; Boonman-Berson et al. 2016; Büscher and Fletcher 2020).

To do so effectively entails acknowledging 'the roles of culture and values in human-wildlife coexistence' (Pooley et al. 2017: 514; see also Dickman et al. 2013). A large body of research has documented so-called local or Traditional Ecological Knowledge (LEK or TEK) and its role in shaping the interactions between people and nonhumans, often opposing this to modern expert or scientific knowledge (Berkes 2017; Berkes et al. 2000). Defined as a "cumulative body of knowledge, practice, and belief that pertains to the relationship of living beings" (Anadón et al. 2009), to describe a form of "situated knowledge" that is "simultaneously local and global" (Nygren 1999: 268), LEK emphasises the existence of a locally developed system of knowledge supporting the management of human-nature relations differing from the technocratic scientific approach dominating conventional conservation efforts (Nygren 1999). As previously noted, LEK is also integral to a constitutionality approach (Haller et al. 2016).

An important aspect of LEK in our case concerns its role within the development of ecotourism as a key support for bear conservation. Ecotourism has been widely advocated as a strategy for sustainable development integrating biodiversity conservation (Weaver and Lawton 2007; Honey 2008). Consequently, much scholarly attention has sought to evaluate ecotourism's effectiveness as a conservation tool (Stronza 2007; Honey 2008) and has highlighted various problems commonly encountered in this effort (Mowforth and Munt 2016). Ecotourism promotion is frequently grounded in the premise that economic benefits will encourage local people 'to protect what they receive value from' (Honey 2008: 162). Yet multiple cases demonstrate how ecotourism often results, on the contrary, in imposing western ideas and representations or functioning as a tool for political control (see e.g., Duffy 2002; West and Carrier 2004; Honey 2008; Fletcher 2009).

In particular, the promised economic benefits of ecotourism involvement have been described as representative of a sustainable development discourse that reframes lively nature as a passive environment containing valuable capital to be sustained (Escobar 1996). This commodification of nature, or 'construction of nature as service provider' (Sullivan 2009, 23), is thereby often introduced via ecotourism into local populations' lifeworlds (Fletcher 2009). Such commodification can drain landscapes of their local socio-cultural significance, replacing this with universal monetary value and further disconnecting people from nonhumans (West and Carrier 2004; West 2006; Hutchins 2007).

Despite such critiques, recent attention focused on the examination of the sociocultural context within which ecotourism develops demonstrates how in a number of cases people transform and resist 'novel cultural influence' in ways that allow them to maintain some control over their engagement in the activity (Fletcher 2009: 281). Hence, the extent to which ecotourism transforms local behaviour and perspectives in unwanted ways 'remains unclear' (ibid., 281). Our case study interrogates this important yet under-researched process, exploring how ecotourism development has proceeded in this context, and how it has engaged specifically with the lifeworlds of local people.

MATERIALS AND METHODS

The study is based on four months of ethnographic research conducted between June and September 2018 by the first author (Toncheva) in the village of Yagodina (Figure 1). During this time Toncheva conducted 30 semi-structured and semi-directive interviews. Informants were selected via snowball and purposive sampling that sought to include different groups of relevant stakeholders: hunters, ecotourism guides, employees in tourism, pensioners and children[1], among others. Some of the interviews were tape-recorded, while others, following the wishes of informants, were documented

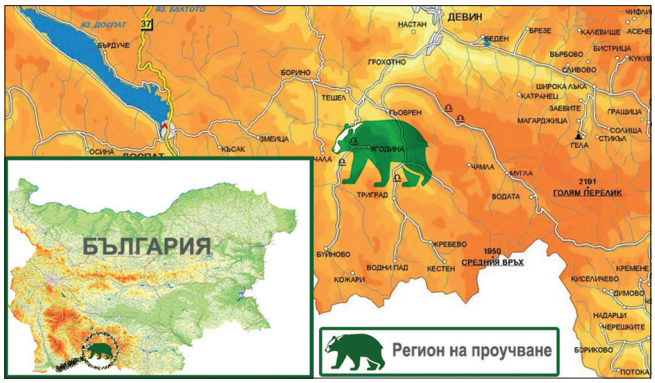

Figure 1
Study area. The village of Yagodina

in a field diary. In the case of local ecological knowledge, the interview data were complemented by administration of 16 questionnaires each containing 72 questions assessing LEK concerning brown bear's ecological and cultural salience to another set of respondents. These questionnaires were not intended to pursue representative sampling of the total population for statistical analysis but merely to complement in-depth interviews with comparative qualitative material collected from a broader range of local residents.

In addition, Toncheva conducted participant observation throughout the research period, including the accompanying of two bear watching trips by British tourists for two full weeks and participation in a bullet casting ritual (more on this below). As tourists were not the primary subject of research, participation in tourism trips was used to observe how ecotourism is performed and organised, what knowledge is used in its delivery and how tourists enter the human-bear cohabitation space, as well as to observe the behaviour of the bears at the bear-watching hide. This experience also enabled learning how to recognise signs of bear activity (prints, flipped around stones, communication trees, etc.) and better understanding bear behaviour due to the multiple lectures delivered by the guide (which were also tape-recorded) during the trip.

Analysis of all this material is grounded in Toncheva's long-term observations of the village, having been employed as a mountain guide there for more than a decade. Consequently, some conclusions, such as the consistent absence of significant human-bear conflicts, are based on patterns observed during a much longer time than the formal research period. This makes Toncheva something of an insider or native researcher in the field site. While this positionality carries the benefit of long-term knowledge and experience concerning the dynamics under investigation as well rapport with local residents affording access to backstage spaces, it also presents the potential to overlook significant issues due precisely to this familiarity and the biases it might introduce into data collection and analysis (Bernard 2011). To guard against this danger, all observations and interpretations have been extensively discussed and debated among the three authors prior to presentation herein.

POSTSOCIALIST CONSERVATION

Bulgaria is a leading country in Europe in terms of biodiversity protection but is rarely addressed in the existing conservation literature. Occupying only 2.5% of EU territory, the country supports about 70% of protected bird species and around 40% of PAs (Natura 2000). Yet the country faces numerous threats to biodiversity due to lack of enforcement, corruption, the existence of a grey economy, and disregard of legislation (including European legislation).

Bulgaria has undergone a long period of transition after the collapse of the socialist regime – the period of so-called postsocialism (Creed 1995; Dorondel 2016) – and it is still struggling to find its way within the common European cultural and economic space. It has faced serious challenges applying European environmental regulations, provoking negative reports from the European Commission claiming that the country has not fulfilled the definition of Natura 2000 protected territories nor clearly introduced measures to protect habitats and endangered species. Indeed, recent assessments conclude that policy measures in relation to about 50% of protected species are insufficient[2]. Given both inadequate application of environmental legislation and plans for its enforcement, building still takes place within Natura 2000 zones. Such issues present serious threats to biodiversity and, together with non-regulated development (and often a lack of state presence), constitute serious challenges for Bulgarian conservation. At the same time, this relative absence of government-directed conservation has afforded the emergence of local arrangements, particularly in rural spaces like the one documented in this article, to govern how humans interact with wildlife.

Bears have become an important focus of national conservation efforts, having been granted protected status by the state since 1993 (Red List of Bulgaria) and later through European legislation after the country's accession to the EU. Although bears' protected status requires their habitats to be included under Natura 2000 protection, many remain outside formal protected areas. Such is the case in the Rodopi mountains, a region with one of the highest bear populations but where, due to various economic interests, no national parks have been established; there are only small, fragmented areas designated as nature reserves. This makes it the region with the most intense human-bear interactions (Дуцов и др. 2012). The total Bulgarian bear population is currently believed to be 600-800, with the population in Rodopi between 206 and 334 (on the basis of collected genetic samples from hairs and scat; Frosch et al. 2014). This number is lower than the carrying capacity calculated by a habitat suitability model developed by Zlatanova (2010), according to which the region could accommodate 430-540 bears (with a potential population of 1000-2000 for Bulgaria as a whole). Suitable habitat in Rodopi is considered the largest and most important in the country, which, given the lack of PAs and the numerous mountain villages there, has led to inevitable human-bear encounters encompassing various conflicts and other interactions.

Yagodina is located in the heart of Rodopi. During the socialist period, the village experienced land collectivisation combined with state planned agriculture and animal breeding, leading to economic development encompassing various employment opportunities (including three active factories, large levels of animal breeding – around six thousand sheep – production of dairy products, timber, etc.). After the socialist collapse, the population faced severe problems: land fragmentation provoking ownership conflicts, lack of financial recourses for cultivation, social transformations related to urban outmigration, privatisation (and in fact abandonment) of existing enterprises and, as a result, scarcity of employment opportunities. The long transition did not improve but actually worsened the area's situation with the population facing a lack of state or foreign investment and hence were left to develop alternative livelihood strategies in the context of available natural resources. Logically, one of these avenues was tourism, given the village's location in the high mountains proximate to two famous gorges (Buynovsko and Trigrad) and caves (Yagodina and Devil's Throat) as well as the well-preserved nature with extremely high biodiversity.

Yagodina is surrounded by forest, all of which has been officially state-owned and managed since socialist times. Yagodina's forest is excellent habitat for brown bears whose numbers, according to the local population, have increased significantly in recent years. This increase is seen to have been facilitated by the agricultural decline experienced during the last 30 years (under postsocialism), during which huge amounts of previously cultivated land has been abandoned. This has led to an unplanned rewilding (Lorimer et al. 2015) wherein now one can see forests where, according to local people, 'we used to grow wheat before'. Population decline due to outmigration in search of employment and removal of the border fence between Bulgaria and Greece (which is, according to many, 'where most bears came from') also contribute to the area's bear population increase.

A further reason for this increase is that bears have been granted a protected status. Exceptions are problematic bears that can be shot after the granting of a special permit from the Ministry of Agriculture, Food and Forestry, following investigations and proof that the animals have actually caused economic or physical damage. Measures against bear poaching are considered so strict, by some respondents, that 'it is easier to kill a man and get away with it than to kill a bear'. Still, the fine for illegal hunting is not so high, even by local standards (up to 5000 lv. or 2500 euro), especially considering the prices for bear products on the black market.

A final factor contributing to the high bear population is the extremely high endemic biodiversity in the surrounding forest. The great variety of species provides an abundance of food for bears, such as wild berries (strawberries, raspberries, cornelian cherries, bilberries, etc.), various roots and grasses, ants, and so forth. This contributes to the lack of conflict and successful cohabitation while also causing various interactions since local livelihoods also comprise forest activities to gather wild foods. Due to this natural abundance, the bears rarely approach Yagodina and have not caused any property damage, while most encounters occur in the forest around livelihood activities or hobbies: hunting, gathering of plants (mushrooms, herbs, berries), hiking/walking, fishing, agriculture (hay collecting, harvesting) or around the nearby caves.

Stories told by the elderly population suggest that there have always been bears around; people between 70 and 90 years old remember encounters that occurred during their parents' lifespan. Still, assertions by local inhabitants that bears' number is much higher now suggests that the animals' previous presence was not so obvious under socialism, due to the villages' economic development and the more stringent restrictions over human mobility (due to border control) occurring then, as well as the fact that bears did not enjoy protected status and were allowed to be hunted and killed. According to local hunters, who are most familiar with the bears around Yagodina, the latter now number about 10-13 just in areas around the village. As many people believe so many bears were never present before, this forces both humans and bears to adapt to a new situation in which both species must adapt to live together.

A LANDSCAPE OF TOLERANCE

As the bears are recognised as fellow inhabitants of the shared space by local residents, they are an important and often discussed topic. The village of Yagodina is relatively small (less than 500 people) and largely homogenous. This means that everybody knows one another and that the village square functions as a center for exchange of news. Bear issues are therefore discussed while drinking coffee in the morning or over a *rakia*[3] in the local bar in the evenings. While not everyone has seen a bear themselves, bears are therefore part of the local lifeworld: we never encountered a villager who had not heard of a story of human-bear encounter even if they had not had a personal one. Most encounters are occasional meetings by chance, occurring predominantly to local hunters or people involved in other forest activities. However, bears have been seen even by people just driving on the road or visiting nearby caves.

Bears are large predators that mainly provoke fear, even for some inexperienced hunters during close unexpected encounters. At the same time, the local population's attitude towards bears is predominantly positive, in part because encounters are rare and because bears are only considered dangerous when they are threatened or when human and bear territories cross. A higher risk is attributed to certain categories of bears: females with cubs and *stuvnitsi* (aggressive bears which are more carnivorous). Still, cohabitation is determined by the attitude of both species who attempt to avoid one another and do not enter conflict situations. Respondents described various methods that could potentially diminish encounters: making a noise, avoiding areas known as bear habitats, as well as some traditional practices such as invoking prayers or spells (a practice that is, however, rarely used nowadays).

In traditional Bulgarian culture, the village or the inhabited space is considered the known, cultivated space as opposed to the forests and fields beyond (Георгиева 1993). Despite ongoing processes of modernisation, Yagodina's high altitude and relative isolation contribute to preservation of certain traditional cultural patterns. Fieldwork data thus evidences that a common division of space between *our* (here, in the village) and that *out there* (the forest, the habitat of the bear) still exists. Within this division, the bears' core habitats can also be considered intimate space which should not be entered by others (humans). This idea is supported by informants' claims that bears should not be disturbed in their territories and, likewise, that they should not enter the space inhabited by humans (the village).

As previously mentioned, the majority of human-bear interactions occur in what we refer to as *cohabitation space* beyond the village: the nearby forests, meadows, rivers and agricultural lands wherein people and bears interact and which are permanently occupied by both species. People are aware of the bears' presence in these shared spaces because they are able to read the various signs bears leave behind (Hinchliffe et al. 2005; Boonman-Berson et al. 2016). Overturned stones are considered evidence of a bear's presence as people are aware that bears feed on the ants found underneath. Another aspect of the landscape associated with bears are the numerous rock holes and caves, which hunters identify as winter hibernation sites. Bear prints and scat, their most obvious markers, are also often encountered.

Some respondents assert that bears don't usually come close to the village. However, this boundary is occasionally crossed, since some villagers have observed signs of bear presence at the outskirts of the village or near their fields and sheep farms. Prints have also been seen near roads, around a newly built hotel which lies a little outside the village and near beehives.

The bears in the area are not managed in the sense that this term is commonly used by conservationists, as people do not act to deliberately produce a certain kind of behaviour or fear in bears. Nor do people actively try to prevent bears from entering human spaces; the occasional boundary crossing that does take place is not considered a threat. Non-invasion of each species' core space by the other is surely a major reason for the lack of conflicts in the area. The cohabitation space, on the other hand, is the shared territory that has thus far been peacefully inhabited by both humans and bears. This peaceful coexistence is reflected in the positive attitude of those interviewed when discussing whether humans and bears are able to share the same space or whether bears should instead be separated in PAs. Most claimed that coexistence is indeed possible, providing various justifications including the following:

> 'Bears should be free, in protected territories they would feel like in a prison.'
>
> 'I am against these reserved areas, here is better (for the bears). If we all care, not disturb them in their natural habitat they would live better.'

In sum, most of the local respondents claimed that humans and bears can cohabitate peacefully. We therefore characterise this as a *landscape of tolerance* for both humans and bears.

LOCAL ECOLOGICAL KNOWLEDGE CONCERNING BEARS

Villagers express a sense of pride that bears can be seen around the village. Bears are considered symbols of power and bravery as well as of the Rodopi mountains as a whole. Bears' character is described as calm and shy, but they are also considered able to remember things for a long time and can be therefore resentful. These beliefs can be related to traditional images of the bear in Bulgarian folklore. The idea that the bears remember for a long time, for instance, is part of these beliefs and has been narrated in folklore tales.

One of these describes a man who rescued a bear's cub, after which the mother, out of gratitude, brought him some gifts. While talking to the bear the man mentioned that her breath smelt badly, after which the bear asked him to hit her on the head with an axe, which he eventually did. Sometime later they met again in the forest and the man asked the bear if they could renew their friendship. The bear showed him the healed wound and told him that she had already forgotten about it but, on the contrary, never forgot his offensive words about her breath[4].

Bears are traditionally considered symbols of power whose attacks are feared, thus various protective practices exist to provide safety and security. Even a saint is attributed the function of lord of the bears - Sveti Andrey[5] (St. Andrew) - on whose feast (30 November) bears used to be honoured and were part of ritual practices. According to folklore, bears' favourite food is corn, which used to be given to the bears on St. Andrew's feast. As these beliefs are, however, associated with Christianity, it is questionable whether we could relate this to the corn villagers leave for the bears as Yagodina is traditionally a Muslim community. However, many traditions are shared by both Christians and Muslims, so in regions traditionally inhabited by bears this is possibly the case. According to these beliefs, by giving cooked corn to the bear, people can divert it from damaging people's crops and livestock. Interestingly, the same function is attributed to the corn left at the bear hide by hunters.

An element of the local Muslim tradition is the *muska* - an amulet prepared by the imam that contains prayers with a protective function. Although it still exists in the area, not many people still use it. However, some people refer to special words (in Turkish) that people used to tell the bear during encounters and that forced the bear to walk away. As one man stated, 'I know from my grandfather, some time ago someone met a bear and told her something in Turkish - bear, go your way I will go mine. And the bear left.'

Some also refer to prayers told before one walks into the forest, which were very likely prayers specially used as protection from bears. Another informant explained, for instance, 'Once people used to say some words before they left for somewhere: I hope that today nothing will happen to me, to be lucky and not meet any animals - bears, snakes, wolves.'

A vital element of local folklore are traditional practices aimed at reducing post-traumatic stress after a bear encounter. The most popular of these still practiced today, and mentioned

by literally all respondents, is *casting of a bullet*. This is a type of healing magic in Bulgarian folk medicine (Гоев 1981) aimed at treatment of fear. It is practiced only by women while the competence is passed from individual to individual and normally from generation to generation. It can be performed for various reasons but is mainly aimed at healing stress from traumatic experience. In relation to bear encounters, the need for treatment was explained by one man as follows: 'XX had seen a bear and couldn't sleep, the bear was large and stood up, at one o'clock at night (this happened). He was in the car and drove back, and then the bear ran away.'

The healing practice should preferably be performed in the morning (soon after the sunrise) at days beginning with S (C in Cyrillic) which are Wednesday and Saturday (in English). This reason for this was unknown (many traditional practices cannot be explained by practitioners who generally claim that this is just how it has always been done). The patient should undergo the casting procedure three times and therefore bring therefore bullets that have been shot (into a tree) and collected. Something should be paid to the healer for the spell to work.

A further cultural practice that still exists but is infrequent nowadays (though mentioned a few times during interviews) is incandescence. The same healer could perform this as bullet casting. To undertake the procedure, the one who encountered a bear must collect various elements such as hair, wood, leaves, etc. from the place where the encounter occurred. These materials are then mixed with sugar and garlic and burned at a crossroad. The patient should then walk around the fire three times while being 'hit with a curling tong', as the healer explained. The whole procedure is accompanied with spells.

ECOTOURISM IN YAGODINA

A large number of Yagodina residents admit that the village is still inhabited today largely due to the development of tourism in the last 10-15 years as an alternative to previously existing employment opportunities. Tourism seemed a logical alternative in the context of postsocialism due to the region's natural assets: the nearby caves and gorges, which have become widely known in the last two decades and have transformed the region into one of the country's most popular tourist destinations. Tourism growth was supported by construction of a viewing platform in 2007 over the Buynovsko gorge just above Yagodina, named Eagle's Eye for its stunning views. This platform attracts thousands of visitors, both Bulgarian and foreign, every summer, when the single lane road along the gorge becomes crowded. This type of tourism can be classified as conventional (Mowforth and Munt 2016) as it lacks an ecological purpose. However, this is the largest employment niche for locals. Respondents estimate the number of villagers involved in tourism as high as 90% and view tourism as an essential livelihood that literally keeps the village alive.

As an alternative to, and in parallel with, this conventional tourism, ecotourism centred on hiking has also been established during the last decade. The main actor in this is a British working with foreign partners (British, Dutch, American, etc.) who brings foreign clients into the region for different itineraries. This tourism is represented to clients as responsible, sustainable[6] and as beneficial for the environment. Respondents considered this tourism beneficial in providing employment opportunities and bringing some investments in the region. In particular, it has directly resulted in foreign tourists occupying the village hotels, visiting the caves, buying and using local products, and so forth.

A specific form of tourism recently developed within this ecotourism niche (by the same tour operator) comprises excursions to encounter bears. Inclusion of brown bears in tourism in Yagodina began with construction of a special place for bear observation: a bear hide. Building the hide is considered a local initiative directly connected with a group of local hunters. This group comprises around 30 members and is organised in a manner typical of hunting parties in Bulgaria. Thus, it has a chairman and members (legal hunters) who are responsible, among other duties, for management and preservation of the wild game in the adjacent hunting area, which is state property and under the jurisdiction of the National Forestry. Among the common activities group members undertake are consultations and decision-making regarding maintenance and feeding of the wild game, growing crops for this purpose, establishment of shelters and, of course, hunting together. Hunting follows established state regulations which designate particular periods during which it is allowed as well as the amount of game which can be hunted without threatening its overall population.

While some disagreement regarding the bear hide's funding and the role of the local tourist union exists, people agree that it was built by the hunters on the 'example of similar observation places' nearby. The building is half dug into the ground and blends into the surroundings with its grass roof and green colour. A rounded metal barrel, functioning as a feeder (Figure 2), was placed about 50 meters away, illuminated by a solar-powered lamp resembling the moon's natural light. The lamp is gradually turned on at night during observations, reducing the risk that the bears are disturbed. The hide is located 30 minutes' drive from the village, and tourists are driven to it along forestry tracks by the hunters, who also work as guides. The three locals employed as guides in this activity are experienced hunters who also accompany tourists during the observation and provide information about the bears' behaviour.

This obvious monopolisation of bear tourism by hunters does not seem to be questioned by the majority of other locals either. This shows that the group of the hunters has, albeit unofficially, been granted the role of managers of bear-related activities as falling within the group's overarching responsibilities. It is also due to the fact that the activity does not appear particularly beneficial; some of the guides claimed that they could benefit much more if involved in other forms of tourism such as driving tourists to the Eagle's Eye viewing platform.

The British tour operator also plays a major role in bear tourism via organisation of specialised tours centred around the bears. Interestingly, this tour operator not only guides bear

trips but is also an ecologist performing research on bears, as founder of a nongovernmental organisation aimed at bear conservation and preservation of the Rodopi Mountains' rural heritage[7]. He presents a slightly different perspective on establishment of the bear hide:

> There were camera traps (of the hunters) to observe what animals are around…what they didn't expect was that the bears started coming. They told me that and this idea came…to put up a hide…it would be interesting for the visitors and also bring economic benefits.

After the bear hide was built, the tour operator organised specialised trips in cooperation with the hunters, aimed at tourists interested in biodiversity and bear conservation in particular. The role of the local guides in these is that with respect to Bulgarian tourists interested to visit the bear hide: to drive the tourists to the site and provide information. The specialised trips, however, are full day activities and are organised with the promise to not only see brown bears (Figure 3) but also to learn more about their ecology and behaviour. The tour operator explained:

> These trips have been specifically designed to be educational and not simply the standard bear watching holidays offered by other companies in Europe. A major focus of the holidays is to educate participants about the ecology and behaviour of bears, as well as conservation issues connected with the protection of both the bears and bear habitats. The holidays are thus additionally contributing to bear conservation by hopefully inspiring participants on the trip to become more knowledgeable advocates for bear conservation worldwide.

The trip's name - the Realm of the Brown Bear[8] – reflects this multipurpose character. It has thus far brought around five groups of foreign tourists per season, each staying in the village for a week and visiting the bear hide daily. This results in around 25 trips to the hide per season which the tour operator declares in advance, meaning that the bear hide is reserved for his groups for this period of the year. These trips bring more economic benefits for the local population than other occasional visitors to the hide who rarely stay overnight.

One of the primary objectives of ecotourism, as previously discussed, is its function as an economic incentive for conservation. Local people are aware that the foreign groups undertaking bear tourism stay in their village for a week specifically because of the bears. This suggests that they realise an economic benefit from their coexistence with the bears, since tourists don't just occupy the village hotels and guest houses but also eat village food and purchase local products (honeys, jams, mushrooms, herbs, souvenirs and handicrafts) and services. Fieldwork data supports this conclusion.

As documented several times in the research, the local population acknowledges the role of the bears in tourism and the latter's contribution. The general evaluation of bear ecotourism is thus very positive despite not benefiting everyone equally or to a significant extent. Yet the fact that bear tourism brings more direct benefits to some than others is seen as potential source of conflicts. As one woman not involved in bear tourism explained, 'This is always difficult, people involved with the bear hide benefit, they make money, others could be jealous.'

The dimensions of this income, however, help to explain why there are few significant conflicts around this type of tourism thus far. The hunting union is the main beneficiary of bear ecotourism yet states it as 'not particularly beneficial'. According to hunters, revenues generally cover the costs of the bears' food (a few thousand kilograms of corn per year), vehicles' fuel, the guides' time and a small amount to support their union. Still, the local bear hide is described as 'the most developed' in the region with people being sent there from other places. Due to this tourism, the hunting union is able to support its various activities: the provision of food for game animals at the feeders, the planting of oat fields that keep the game in the region, social gatherings, and so forth.

As currently no bear inflicted damage has occurred, bear tourism functions, particularly for the hunters, as a direct incentive to maintain the bear population. Hunters' paradoxical role as bear conservationists seems beneficial for the bears since hunters are also the bears' main threat (bears are still illegally hunted in some regions of Bulgaria despite legislation and EU compensation schemes). As one hunter and bear guide admitted, 'So far they [the bears] have a good role, that's why we don't chase them away.'

Figure 2
The feeder with corn at the bear hide. Picture: Svetoslava Toncheva

Figure 3
Bears feeding at the bear hide. Picture: Svetoslava Toncheva

Most economic benefits come from foreign tourists, who are not only seen as more interested in wildlife, but also wealthier than Bulgarians, and therefore able to afford the higher fees for visiting the bear hide. Therefore, the majority of participants in bear tourism remain foreign, predominantly Western Europeans.

An important factor that contributes to the present sustainable level of bear tourism is that it is not the main tourism in the area but rather a small addition to it. The low levels of bear tourism are seen by some as presenting potential for further development, while others, mainly hunters, claim that they deliberately don't advertise it and prefer to limit its extent. This is understandable considering their motivation to maintain populations of other animals for hunting (as evidenced by camera traps, the bear hide is still used by other wild animals such as wild boar, deer, etc.). Low levels of bear tourism are also beneficial for the bear population and the region's ecological integrity. As the bear guide and ecologist explained, if there are too many or too frequent tourists visiting the bear hide, there is a danger that environmental disturbance will increase above a sustainable threshold, and that this will negatively impact the bears and other wildlife in the vicinity.

Development of bear tourism, as already mentioned, is thus seen as 100% a local initiative. This means that either the foreign tour operator's role is not fully acknowledged or the fact that the company has been present in the village for more than a decade means that it is no longer considered external. Moreover, the aforementioned tour operator brings groups for the bulk of the tourist season and hence leaves little space for other operators to enter the region. Unlike in many cases where ecotourism projects impose certain outside views on the local population (West 2006; Fletcher 2014), therefore, in the present case we find local people occupying a central role in the activity or in equal partnership with nominal outsiders.

DISCUSSION

The research results and the long-term observations of human-bear relations in Yagodina demonstrate how humans and bears have established particular cohabitation practices as result of their interactions in overlapping space. The lack of concrete management strategies imposed from the outside has given people and bears freedom to establish their own mechanisms for negotiating interactions. This bottom-up approach allows such mechanisms to develop in the context of local realities and lifeworlds rather than via external ideas concerning how conservation should function. Lack of state conservation frameworks and control imposed from above has led in this case to the establishment of practices of adaptation and learning to live together, rather than substantial modification of behaviour by either species. Development of these cohabitation mechanisms and the fact that they are thus far fairly functional affords characterisation of this as a landscape of tolerance.

Important factors explaining this situation identified in this analysis include the following:

First, local perceptions are characterised by a non-dichotomous division between nature and culture, within which only the immediate village space is separated into a human-centric category. Cohabitation and the sharing of common space is thus seen as a natural living condition for both people and bears.

Second, tolerance results from efforts by people to understand the bears, their behaviour and needs, thus granting the animals their necessary space rather than viewing bears solely with fear or aggression. 'Looking through the eyes' of the bears seems, therefore, an essential precondition for successful cohabitation. Our discussion of LEK concerning bears shows that they occupy a significant place in local people's lifeworlds. The general knowledge of bears, in this relation, is shared by all inhabitants who can read (Hinchcliffe et al. 2005; Boonman-Berson et al. 2016) the bears' signs and understand the animals as permanent inhabitants of the shared space, interactions within which are a natural occurrence. Particular elements of LEK comprising traditional folklore (now mostly disappearing) also promote positive images of the bears as symbols of fertility and power. The most functional element of this folklore seems to be the protective and stress releasing practices, especially the casting of a bullet. This shows the functionality of LEK for the human-bear cohabitation by mitigating possible negative effects after an encounter with a bear and, in this way, maintaining balance within the system of relationships.

Third, ecotourism established around the bears has, in this particular case, proven beneficial for their conservation. This is due to several factors. One is tourism's maintenance at low levels, thus minimising its local sociocultural and ecological impacts. Additionally, bear tourism is considered by local people their own initiative and not imposed from outside. The role of the main tour operator, while foreign, is not considered an external intervention but rather a partnership and contribution to the village's main current livelihood strategy. For this reason, local people remain managers of their own resources and influential actors in the tourism process. Still, bears' management is attributed to a particular group, namely the hunters. Our research demonstrates that their role in establishing the bear hide and managing bear tourism is generally not questioned by the population who consider this type of ecotourism beneficial, even if only a few people receive direct income from it. Bear tourism functions, therefore, as an economic and conservation incentive in particular for the hunters by supporting their activities and their positive attitude towards the bears, rendering them, paradoxically, the main bear conservationists.

Bear tourism is, moreover, thus far compatible with human-bear cohabitation due to the manner in which it is organised: by a researcher and ecologist in a noninvasive way, with respect for specifics of the bears' behavior and needs. The fact that it is kept at low levels by all actors, albeit for different reasons – by the tour operator in consideration of the bear population and by hunters with the aim to preserve other wildlife for hunting – is also beneficial for the bears by preventing impacts that could disturb the region's ecological integrity.

Further, the limited income ecotourism generates doesn't ensure large economic benefits and is, consequently, not a strong source of conflicts, being only a small addition to the mainstream tourism that is the community's dominant livelihood strategy. This non-reliance on market expansion (Büscher and Fletcher 2020) not only limits possible conflicts but also prevents the further commodification of nature and the animals' disconnection from local cultural values and meanings (West 2006; Hutchins 2007).

Moreover, in contrast to copious research documenting how ecotourism promotion can transform local lifeworlds, due to unintended factors (the language barrier and the role of the tour operator) no such negative effects are observed in this case. This contributes to maintenance of boundaries between the local lifeworld and the outside world, preserving the specifics of local human-nature relations in the face of global integration. In addition, the importance of bears for tourism functions as *symbolic capital* providing a sense of pride for the local population that bears are part of their lifeworlds and landscape.

CONCLUSION

Our analysis demonstrates aspects of all three central principles of convivial conservation (Büscher and Fletcher 2020): integrated spaces in which people and wildlife comingle; localised and (relatively) democratic forms of governance; and non (or at least little) commodified forms of income generation. Additionally, in demonstrating how these principles have been implemented locally in the absence of significant direct intervention by either state agents or international conservationists and how these have shaped institutions with a clear sense of local ownership, the case also appears to exemplify various of the preconditions Haller et al. (2016) outline as requisite to successful constitutionality.

First, the case clearly presents an 'emic perception of need' for effective collective action with respect to human-bear coexistence. Second, it also exhibits a largely 'participatory process' comprising a majority of local residents to develop such action, although whether this process indeed effectively addresses power asymmetries within the community remains in question.

Third, the case seems to exhibit 'preexisting institutions' for managing human-bear relations, mostly entailing division of space between the different species' core zones of occupation as well as guidelines concerning how to negotiate human-bear interaction. Of course, this conclusion must be tempered by acknowledging various limitations in our analysis of the case. In particular, our study remains limited to the period during which direct participation occurred and hence remains merely a snapshot of the longer historical trajectory within which recorded dynamics are embedded. While the study is able to document how local practices and forms of knowledge are expressed and function at this particular point in time, therefore, it is not able to analyse how they have changed and developed leading up to this point. Hence, the extent to which these dynamics can be considered durable *institutions* in the sense that CPR researchers tend to understand this term remains questionable.

Fourth, the case demonstrates the presence of 'outside catalysing agents' contributing to governance practices, particularly with respect to the foreign tour operator helping to stimulate ecotourism development in support of bear conservation. The case also most definitely entails strong 'recognition of local knowledge' as the basis for cohabitation practices.

With respect to Haller et al.'s (2016) fifth and final precondition – 'higher-level state recognition' of local practices – the situation is ambivalent. On the one hand, it is clear that relatively peaceful coexistence between people and bears is underpinned by state ownership of the land within which the two species meet as well as formal regulation (both state and EU) protecting bears within this space. On the other hand, beyond this neither state forces nor other powerful outside actors (e.g., large conservation NGOs) are actively present in the local context, hence local actors remain largely autonomous in the execution of cohabitation strategies. In this sense, the case can be seen to exemplify dynamics of *subsidiarity* as per Ostrom and Cox's (2010) ideal multi-tier model of natural resource governance in which most immediate decision-making is left to local-level actors in relation to which state agents exert a largely background supportive role.

In conclusion, the analysis suggests that the relative absence of significant human-wildlife conflict in this case is due in large part to the fact that human-bear relations embody most elements of the convivial constitutionality framework we have introduced to analyse it. In developing the analysis, the study has therefore also demonstrated the potential for the framework to guide investigations of cases of human-wildlife conflict and coexistence more broadly. It can be used to assess both those aspects of the framework that are functioning effectively within a given case and of those that necessitate more focused attention and cultivation. We therefore invite other researchers to explore to what extent such this same framework can prove productive in their own contexts of study in working to foster conditions for convivial cohabitation more widely.

AUTHOR CONTRIBUTION STATEMENT

Toncheva collected all data for this paper, while Fletcher and Turnhout contributed to analysis and writing.

ACKNOWLEDGEMENTS

Work on this paper has been supported by the NORFACE and Belmont Forum Transformations to Sustainability Joint Research Programme Project #949 'Towards Convivial Conservation: Governing Human-Wildlife Interactions in the Anthropocene (CONVIVA)'.

DECLARATION OF COMPETING/CONFLICTING INTERESTS

No conflict of interest.

FINANCIAL DISCLOSURES

No financial disclosures.

RESEARCH ETHICS APPROVAL

As noted in the text, no formal ethics approval was required by either institution at which the research was conducted.

DATA AVAILABILITY

All data for the paper is stored securely by the authors in accordance with university data management protocols and is available for evaluation upon request.

NOTES

1. While the research required no formal ethical review and clearance, potentially vulnerable groups such as these were protected through adherence to conventional ethical guidelines for ethnographic field research (see e g. http://www.aaanet.org/issues/policy-advocacy/upload/AAA-Ethics-Code-2009.pdf. Accessed on October 12, 2018).
2. European Commission Report. 2017: http://ec.europa.eu/environment/eir/pdf/factsheet_bg_bg.pdf. Accessed on March 22, 2018.
3. Traditional Bulgarian spirit made of grapes or plums.
4. http://roditel.bg/mechkata-i-loshata-duma-balgarska-narodna-prikazka. Accessed on October 12, 2018.
5. The saint, according to the religious narratives, managed to tame and defeat a bear, being able to control, in this way, the wilderness and uncultivated nature.
6. https://www.exodus.co.uk/responsible-travel. Accessed on October 17, 2018.
7. http://wildrodopi.org/wild-rodopi-mission. Accessed on November 12, 2018.
8. https://www.exodus.co.uk/bulgaria-holidays/wildlife/bulgaria-realm-brown-bear/wbb. Accessed on October, 2018.

REFERENCES

Ampumuza, C. and C. Driessen. 2020. Gorilla habituation and the role of animal agency in conservation and tourism development at Bwindi, South Western Uganda. *Environment and Planning E: Nature and Space*. October 2020. doi:10.1177/2514848620966502.

Anadón, J.D., A. Giménez, R. Ballestaret, et al. 2009. Evaluation of Local Ecological Knowledge as a method for collecting extensive data on animal abundance. *Conservation Biology* 23(3): 617–625.

Berkes, F. 2017. *Sacred ecology*. London: Routledge.

Berkes, F., J. Colding, and C. Folke. 2000. Rediscovery of Traditional Ecological Knowledge as Adaptive Management. *Ecological Applications* 10(5): 1251–1256.

Boonman-Berson, S., C. Driessen, and E. Turnhout. 2019. Managing wild minds: from control by numbers to a multinatural approach in wild boar management in the Veluwe, the Netherlands. *Transactions of the Institute of British Geographers* 44(1): 2–15.

Boonman-Berson, S., E. Turnhout, and M. Carolan. 2016. Common sensing: human-black bear cohabitation practices in Colorado. *Geoforum* 74: 192–201.

Brockington, D., R. Duffy, and J. Igoe. 2008. *Nature unbound: conservation, capitalism and the future of protected areas*. London: Earthscan.

Büscher, B. and R. Fletcher. 2019. Towards convivial conservation. *Conservation and Society* 17(3): 283–296.

Büscher, B. and R. Fletcher. 2020. *The conservation revolution: radical ideas for saving nature beyond the anthropocene*. London: Verso.

Creed, G. 1995. The politics of agriculture: identity and socialist sentiment in Bulgaria. *Slavic Review* 54(4): 843–868.

Dickman, A.J., E.A. Macdonald, and D.W. Macdonald. 2011. A review of financial instruments to pay for predator conservation and encourage human-carnivore coexistence. *Proceedings of the National Academy of Sciences* 108(34): 13937–13944.

Dickman, A., S. Marchini, and M. Manfredo. 2013. The human dimension in addressing conflict with large carnivores. *Key Topics In Conservation Biology* 2(1): 110–126.

Dorondel, S. 2016. *Disrupted landscapes: state, peasants and the politics of land in postsocialist Romania*. New York: Berghahn Books.

Duffy, R. 2002. *A trip too far: Ecotourism, politics and exploitation*. London: Earthscan.

Escobar, A. 1996. Construction nature: elements for a post-structuralist political ecology. *Futures* 28(4): 325–343.

Fletcher, R. 2009. Ecotourism discourse: challenging stakeholders theory. *Journal of ecotourism* 8(3): 269–285.

Fletcher, R. 2014. *Romancing the wild: cultural dimensions of Ecotourism*. Durham, NC: Duke University Press.

Frank, B. and J.A. Glikman. 2019. Human-Wildlife Conflicts and the need to include coexistence. In: *Human-wildlife interactions: turning conflict into coexistence* (eds. Frank, B., J.A. Glikman, and S. Marchini). Pp. 1–19. Cambridge, UK: Cambridge University Press.

Frank, B., J.A. Glikman, and S. Marchini (eds.). 2019. *Human–wildlife interactions: turning conflict into coexistence*. Cambridge, UK: Cambridge University Press.

Frosch, C., A. Dutsov, D. Zlatanova, et al. 2014. Noninvasive genetic assessment of brown bear population structure in Bulgarian mountain regions. *Mammalian Biology-Zeitschrift für Säugetierkunde* 79(4): 268–276.

Haller, T., G. Acciaioli, and S. Rist. 2016. Conditions for crafting local ownership of institution-building processes. *Society & Natural Resources* 29: 68–87.

Haller, T., A. Zangger, and S. Weissman. 2020. *Convivial constitutionality: human-predator interrelations in complex social-ecological systems*. Research proposal. Switzerland: Swiss National Science Foundation.

Haraway, D.J. 2016. *Staying with the trouble: making kin in the Chthulucene*. Durham, NC: Duke University Press.

Hinchliffe, S. 2007. *Geographies of nature: societies, environments, ecologies*. London: Sage.

Hinchliffe, S., M.B. Kearnes, M. Degen, et al. 2005. Urban wild things: a cosmopolitical experiment. *Environment and planning D: Society and Space* 23(5): 643–658.

Hodgson, I., S. Redpath, C. Sandström, et al. 2020. *The state of knowledge and practice on human-wildlife conflicts*. Cambridge, UK: Luc Hoffmann Institute.

Honey, M. 2008. *Ecotourism and sustainable development: who owns paradise?* 2nd ed. Washington, DC: Island Press.

Hutchins, F. 2007. Footprints in the forest: ecotourism and altered meanings in Ecuador's upper Amazon. *The Journal of Latin American and Caribbean Anthropology* 12(1): 75–103.

Illich, I. 1973. *Tools for conviviality*. New York: Perennial.

Kareiva, P., M. Marvier, and R. Lalasz. 2012. Conservation in the anthropocene: beyond solitude and fragility. http://thebreakthrough.org/index.php/journal/past-issues/issue-2/conservation-in-the-Anthropocene/. Accessed on September 25, 2020.

Lorimer, J. 2015. *Wildlife in the anthropocene: conservation after nature*. Minneapolis: University of Minnesota Press.

Lorimer, J., C. Sandom, P. Jepson, et al. 2015. Rewilding: science, practice, and politics. *Annual Review of Environment and Resources* 40: 39–62.

Margulies, J.D. and K.K. Karanth. 2018. The production of human-wildlife conflict: a political animal geography of encounter. *Geoforum* 95: 153–164.

Mowforth, M. and I. Munt. 2016. *Tourism and sustainability: development, globalisation and new tourism in the third world*. London: Routledge.

Nygren, A. 1999. Local knowledge in the environment-development discourse. *Critique of Anthropology* 19(3): 267–288.

Ostrom, E. and M. Cox. 2010. Moving beyond panaceas: a multi-tiered diagnostic approach for social-ecological analysis. *Environmental Conservation* 37(4): 451–463.

Pooley, S., M. Barua, W. Beinart, et al. 2017. An interdisciplinary review of current and future approaches to improving human-predator relations. *Conservation Biology* 31(3): 513–523.

Stronza, A. 2007. The economic promise of ecotourism for conservation. *Journal of Ecotourism* 6(3): 210–230.

Sullivan, S. 2009. Green capitalism, and the cultural poverty of constructing nature as service provider. *Radical Anthropology* 3: 18–27.

Toncheva, S. and R. Fletcher. 2021. Knowing bears: an ethnographic study of knowledge and agency in human-bear cohabitation. *Environment and Planning E*: *Nature and Space* 0(0): 1–23.

Turnhout, E., C. Waterton, K. Neves, et al. 2013. Rethinking biodiversity: from goods and services to "living with". *Conservation Letters* 6: 154–161.

Treves, A. and K. Karanth. 2003. Human-carnivore conflict and perspectives on carnivore management worldwide. *Conservation Biology* 17: 1491–1499.

Van Valkenburgh, B. and R. Wayne. 2010. Carnivores. *Current Biology* 20(23): 21–57.

Weaver, D. and L. Lawton. 2007. Twenty years on: the state of contemporary ecotourism research. *Tourism Management* 28: 1168–1179.

West, P. 2006. *Conservation is our government now: the politics of ecology in Papua New Guinea*. Durham and London: Duke University Press.

West, P. and J.G. Carrier. 2004. Getting away from it all? ecotourism and authenticity. *Current Anthropology* 45(4): 483–498.

Wilson, O. 2016. *Half-earth: our planet's fight for life*. New York: Liveright Publishing.

Wuerthner, G., E. Crist, and T. Butler (eds.). 2015. *Protecting the wild: parks and wilderness, the foundation for conservation*. London: Island Press.

Zlatanova, D. 2010. *Modelling the habitat suitability for the bear (Ursus arctos), the wolf (Canis lupus) and the lynx (Lynx lynx) in Bulgaria*. Ph.D. thesis. Sofia University, Sofia, Bulgaria.

Georgieva, I. 1993. *Bulgarian folk mythology*. 2nd edition. Sofia: Science and art Goev, A. 1981. Casting of a bullet against fear. *Bulgarian ethnology* 3-4: 57–63.

Dutcov, A., A. Obretenov, B. Velinov, et al. 2012. *Action plan for brown bear in Bulgaria*. Sofia: Ministry of environment and waters.

Received: 08-Oct-2020**; Revised:** 14-Jun-2021**; Accepted:** 18-Jun-2021**; Published:** 04-Sep-2021