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Butterflies, organized crime, and "sad trees": A critique of the Monarch Butterfly Biosphere Reserve Program in a context of rural violence

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ABSTRACT

The conservation of the monarch butterfly (Danaus plexippus) is rearranging the rural landscapes of Michoacán and Estado de México, Mexico. Based on ethnographic and historical data, and combining insights from the green security and neoliberal conservation literatures, this paper examines how monarch butterfly conservation unfolds in an area shaped by a recent designation as a UNESCO Man and the Biosphere Reserve as well as increasing violence associated with the Mexican Drug War. I argue that these processes are deeply interconnected. I show how the conservation program, and the broader neoliberal project of which it is part, have undermined social control of land by converting communally managed forests into a supposedly human-free reserve. This has transformed the region into a frontier zone that facilitates the increased presence of organized crime groups and devolves responsibility for forest security to local residents. I show how the monarch reserve's core and buffer land boundary, and the human and nonhuman divide underpinning it, reconfigures authority in ways that deepen the control of organized crime, facilitate the expansion of il/licit economies, and undermine sustainable community forest management. While international conservation actors view the reserve as the best strategy for preventing the disappearance of the monarch's migratory phenomenon, my analysis concludes that the MAB has increased the risk of disappearance of both its butterfly and human inhabitants. As an alternative to conventional conservation strategies designed to separate human and nonhuman nature, principles from nondualist traditional ecological ethics can inform better pathways for protecting both the region's humans and nonhumans.

1. Introduction

Monarch butterflies (*Danaus plexippus*) migrate each winter from the northern regions of the United States and Canada to Mexico.[1] The East Coast monarch population performs a 4000 km loop, overwintering in Michoacán's and Estado de México's [Edomex] Oyamel Forest for four months before returning to its northern habitats in the spring. The Mexican Oyamel forest has been, until now, the only forest type that can host the monarchs in their overwintering phase. As such, Oyamel's survival is crucial for the survival of the monarch migratory phenomenon. This forest is now a UNESCO-protected territory under the Man and the Biosphere Program (MAB), called the Monarch Butterfly Biosphere Reserve (MBBR) (see Fig. 1).[2] The reserve is also home to increasing levels of violence and criminal activity. During the weeks I was writing about illicit economies and violence in this rural region of Mexico, I received disturbing news: a central character in the conservation of the monarch butterfly, Mr. Homero G. Gonzalez, was formally reported as *'desaparecido'* or disappeared, often translated as 'missing.' Disappearance is a form of crime that deprives an individual of their freedom or life and instills terror and pain in the broader community by preventing the necessary mourning of those who have disappeared.

The alleged crime occurred while he was working in ecotourism activities in one of the monarch sanctuaries at the top of the Oyamel mountains, where large congregations of monarchs overwinter. This region was Homero's hometown. Homero's disappearance was widely publicized and reached international audiences through BBC and the *Washington Post*. Media and social media coverage reinforced a predictable narrative common to conservation sites worldwide: that loggers were to blame for Homero's mysterious departure. Yet, having worked in the MBBR for years, my local interlocutors and I knew that the alleged crime was more complex than a simple case of "loggers" disappearing an "environmental activist." Rather, the disappearances of Homero

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[1] The East Coast population traverses the three countries and constitutes a larger migration and overwintering phenomenon.

[2] For Mexican habitat deforestation statistics see (Vidal et al., 2014; López-García, 2013) and for the U.S. habitat see (Agrawal, 2017; Pleasants & Oberhauser, 2013; Zaya et al., 2017).

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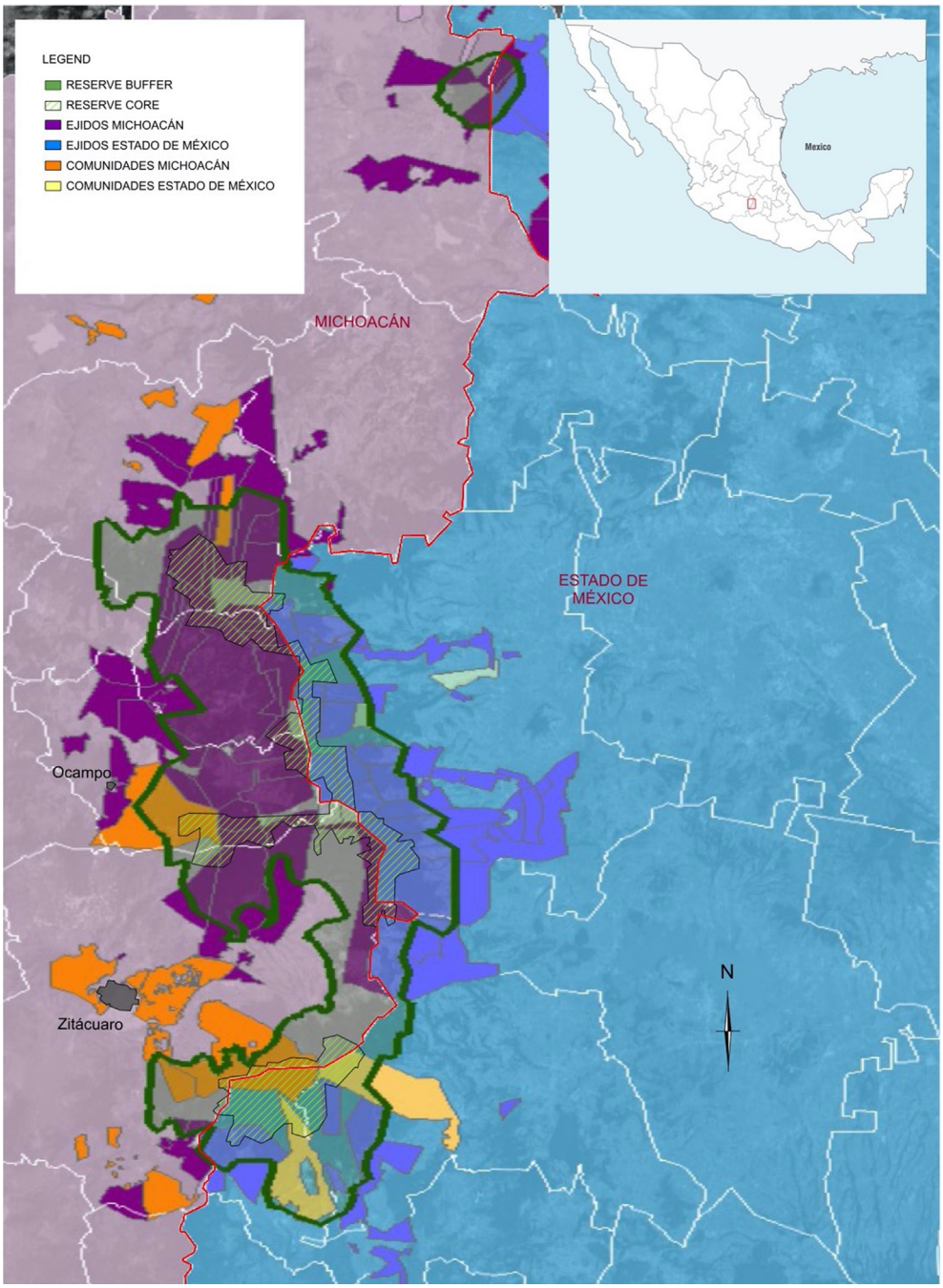

Fig. 1. Map of the Monarch Butterfly Biosphere Reserve. The map shows the social property (*ejidos* and *comunidades*) included in the year 2000 rezoning still in place today. In total, the MBBR includes 72 existing social properties, 59 of which are *ejidos* (mestizo) and 13 of which are *comunidades* (Indigenous), as well as 21 private properties. Within that, the core area contains 23 *ejidos*, 10 Indigenous *comunidades*, 6 private properties, a federal zone, a state zone, and an area in legal dispute (Garcia Serrano Eligio, Frausto Juan Manuel Leyva, & González Montagut, 2016). The different colours illustrate the distinct social properties (mestizo or indigenous) and the two states of Michoacán and Edomex. The Map was made by technician SAM using Mexico's Federal Government public databases from RAN [Registro Agrario Nacional] and CONANP [Comision Nacional de Areas Naturales Protegidas.1) RAN https://sig.ran.gob.mx/sigKML.php. p.2) CONANP http://sig.conanp.gob.mx/website/pagsig/info_kml.htm.

and countless others in the area reflect a worrying rise of violence within the reserve associated with a growing presence of organized crime (OC).

Homero's tragedy compelled me to consider a series of new questions: What underpins disappearances and deaths in this region? How can we understand the disappearance of a person who, at the moment he went missing, was working to halt the disappearance of a charismatic migratory insect? How can scholars of conservation interpret a circumstance in which the positioning of monarchs at risk of disappearance has put certain humans at risk of the same fate? My efforts to unravel these questions reveal a story that brings together monarch butterflies, organized crime networks, state bureaucrats, international conservation actors, and local forest users. My central argument is that the UNESCO conservation program designed to protect the monarch, and a broader series of neoliberal political economic transformations in Mexico and North America, have collectively reshaped local, regional, global, and human-nature relationships in ways that have facilitated the expansion of illicit economies and violence within the monarch butterfly reserve.

To construct this argument, the paper draws on three fieldwork seasons in the MBBR and adjacent towns between 2011 and 2014

during the monarch overwintering season. It is informed by a total of 60 semi-structured interviews with government workers, NGO workers, and community members. Most of the conversations with people disadvantaged by the reserve took place as part of unrecorded interactions during participant observation in four communities: two with tourist access and two without tourist access but who are nonetheless subject to restrictions upon forest use. For safety purposes, I avoid naming the four communities. In addition to this field data, the paper relies heavily on archival data on local ecological knowledge and the history of the reserve's formation obtained at local, regional, and national archives and libraries.

The paper is structured as follows: It first shows how the MBBR case speaks to current literature on neoliberal conservation and green security in relation to the expansion of illicit economies. Similar to dynamics identified by green security scholars in national border regions, the MBBR is increasingly becoming a frontier region of unregulated economic activity, in which violence redefines human and more-than-human relations. Expanding the scope of the security studies literature beyond national borders, I argue that a core and buffer demarcation introduced to protect the monarch reworks lines of power and authority within the reserve. Specifically, this land use classification undermined local control and authority over land in ways that enabled illicit economies to expand into the reserve. Section two illustrates how Mexico's neoliberalization created the conditions for conservation to facilitate this outcome. NAFTA (North American Free Trade Agreement) has amplified organized crime's business activities throughout the region. In Mexico, neoliberal reforms undermined local agrarian governance structures, as well as rural livelihoods more broadly. The power relations and land uses catalyzed by MBBR and these neoliberal reforms allowed organized crime to gain a foothold in the reserve area, resulting in the proliferation of activities such as coercion and extortion, disappearance, homicide, human trafficking, and illegal logging to clear land for the avocado industry. To support this claim, the paper discusses the history of the reserve through two interrelated processes that aimed to protect monarchs. First, I show how the World Wildlife Fund (WWF)/ Fondo Monarca's (FM) payment for ecosystem services (PES) scheme commodified land once managed as a forest commons. PES was intended to reinforce the creation of a human-free core zone as part of the reserve's division into core and buffer conservation areas. Second, it discusses the enduring presence of local ecological ethics cultivated through generations of communal forest management in the pre-reserve period. I find that, despite all the risks of entering restricted core zones, communities are patrolling their commons in an attempt to stop loggers and resist coercion from organized criminal groups.

2. Il/licit economies and violence at nature reserves

In the remainder of the paper, I use the term il/licit economy to describe the recent economic activities within this region in order to recognize the blurred boundaries between licit and illicit global economies (Banister et al., 2015; Feltran, 2019; Nordstrom, 2004). This term can also recognize the difficulty in categorizing state and non-state sanctioned violence. In the case of 'disappearance' discussed above, it is common to distinguish between forced disappearance —which is state-led— and disappearance —not proven to be state-led. However, in recent decades in Latin America these distinctions have become blurrier as groups that initially served the state have evolved, in some cases, into paramilitary groups or into regional and transnational criminal organizations wholly dedicated to illicit economies yet merged with global circuits of capital. In this paper I show that the growth of these il/licit economies and associated violence are connected with Mexico's agrarian reforms spurred by NAFTA. In particular, I illustrate how the trade agreement contributed to socio-economic transformations in the Mexican countryside that turned rural areas into battlefields for access to a new organized crime economy. OC is commonly associated with drug trafficking, coercion, disappearance, and racketeering; however, a less well-known branch of this economy which is equally important to this study is illicit logging. Because the oyamel tree is the butterfly's sole host plant in the Mexican winter habitat, its logging poses a key problem for monarch conservation. While industrial logging of the tree in the region dates as far back as the 1850s (Pérez, 2009) when international companies received logging concessions in Indigenous territory, it was formally outlawed in some areas from 1980 onwards with the reserve's creation. In more recent years, the tree's logging has proceeded illegally, mainly carried out by OC networks.

The excessive logging of the 1800's was detrimental to the people and butterflies of this region, but it changed with the Mexican Revolution (1910) and its land restitution through the granting of communal land use rights. As part of the post-revolution land reform, communal usufruct rights to lands were issued to mestizo communities in the form of *ejidos*, and Indigenous communities in the form of *comunidades*. Recipient communities were either the land's original owners or landless peasants petitioning for land as restitution for land grabbing during colonial and early postcolonial times. In the area now covered by the MBBR, *ejidos* and *comunidades* have traditionally preserved upper mountain ranges as communal lands for a community's collective use, including sustainable forest exploitation, while the lower hills were divided into family plots where households grew crops in traditional food gardens called *milpas*. This land use system changed when the monarch migratory and overwinter phenomenon arrived on the global conservation scene in 1976.

After decades of carefully tagging monarchs' wings, the Canadian scientist Frederick Urquhart tracked the migratory route of the monarch butterfly north and south in 1976. Soon after, WWF, National Geographic, and private and public institutions in charge of nature protection in Mexico (such as Fundación Slim and the national ministry of environment, now called SEMARNAT) came together in support of the creation of a Monarch Butterfly Reserve. Passed into law in 1980, the decree that mandated the reserve banned logging and *all human trespassing* during monarch overwintering season in the entire area of the reserve. These early restrictions were met with considerable resistance from local communities whose livelihoods were dependent on both the *milpa* and access to communal forests. In an attempt to protest the restrictions, communities burned and logged their own plots within the communal property, or even sabotaged their neighbors' land. The early regulations thus had detrimental impacts on both the forest and the social fabric of the community in ways that foreshadowed the future conflicts that culminated in Homero's death. I attribute these conflicts in part to the way the reserve transformed the *ejidos'* and *comunidades'* socially-regulated commons (Brenner, 2009; Hernández & Merino, 2004; Honey-Rosés, 2009; Velasco Orozco Juan, 2001). By converting a commons that was governed through communal institutions into a protected area free of people, the policy ironically created a situation that was less able to protect humans, oyamel trees, and butterflies. The links between conservation and violence are thus not purely coincidental, nor isolated. Indeed, green violence (Büscher et al., 2015) appears in association with many different factors and historical settings, and violent conflicts accompanying land dispossession for conservation are well documented (Agrawal & Redford, 2009; Chapin, 2004; Neumann, 2008; West et al., 2006).

Some scholars of critical conservation studies regard this dispossession of land for conservation as a process of 'green grabbing' (Fairhead et al., 2012) in which land enclosures in the name of

ecosystem protection work to further capitalist expansion and class privilege (Anderson & Berglund, 2003; Baviskar, 2005; Binnema & Niemi, 2006; Brockington, Duffy, & Igoe, 2008; Büscher & Fletcher, 2017; Castree & Henderson, 2014; Neves & Igoe, 2012). Within this approach, there is ample evidence of how conservation creates spaces for instituting neoliberal economies (Bryant et al., 2011; Büscher et al., 2014; Fairhead et al., 2012; Fletcher, 2010; Sullivan, 2006) and their usual structures of governance through financialization and decentralization (Holmes & Cavanagh, 2016). For example, carbon markets (Bryant, 2018; Pérez, 2009), ecotourism (Büscher & Fletcher, 2017; Devine, 2014; Duffy, 2002), and ecosystem service exchange programs, often known as payments for ecosystem services (PES) (Büscher, 2012; Joslin, 2020), serve to commodify elements of 'nature', while reconfiguring the role of the state from regulator to enabler of market activity (Corson, 2011; Lombard, 2016; McCarthy & Prudham, 2004). According to this literature, the combination of these two factors, conservation by dispossession and reduced state presence, leads to the emergence or re-emergence of violence.

In recent studies of conservation and violence, protected areas have been identified as instrumental sites in security projects and as zones to control internal, regional, or national borders. These scholars of 'green militarization' and 'green security' (Bocarejo & Ojeda, 2016; Kelly & Ybarra, 2016; Lombard, 2016; Loperena, 2016; Peluso, 1993; Peluso & Vandergeest, 2011) document the rise of violence within reserves as a practice for building or maintaining international or intranational borders that often coincide with nature parks' boundaries. The critical input from these green security scholars is that conservation is an entry point for violently asserting state or parastatal dominion over human and nonhuman nature. Yet, the earlier institutionalization of 'national parks' and 'nature reserves' at state borders served geopolitical functions that have dramatically changed with transnationalism and the changing role of nation-states (Brunet-Jailly, 2017; Houtum, 2012; Nordstrom, 2004). If in the past parks worked to reify nationalist or regional sentiments and were instrumentalized to build, dispute, and imagine the border itself (Lunstrum, 2014; Massé, 2016), today, reserves are spaces in which other kinds of borders are constructed and deconstructed. These include land use boundaries demarcating core and buffer zones, and the lines between organized crime, local communities, and the state.[3]

Securitization of protected areas can also serve to recover control over land or people. For example, conservation areas can be enlisted in efforts to recover control from 'drug' networks (Bocarejo & Ojeda, 2016; McSweeney et al., 2017) or from alleged 'terrorist' networks (Duffy 2016). In parallel, such security projects rely on the racialized criminalization of the nature reserve trespasser. By keeping out these 'undesirable' elements, the tracing of park boundaries entails more than protecting species but also containing and protecting 'dreamlands' for elite consumption. Such boundaries in turn ignore and rupture the complex and multiscalar socio-ecological relations that historically constituted these spaces. Duffy (2016) asserts that the recent labelling of "poachers-as-terrorists" enables the use of violent tactics, such as Counter-Insurgency (COIN), to extend the interests of the war on terror into strategic nature reserves (Duffy, 2016). Similarly, Latin Americanist scholars (Bocarejo & Ojeda, 2016; Loperena, 2016; Ybarra, 2016) observe how conservation discourses support the war on drugs by means of cataloging nature reserve trespassers as 'narco' collaborators whose flimsy (environmental) ethics make them subject to state and/or paramilitary violence. In these accounts, the policing of nature through military and paramilitary means inevitably enrolls local actors into security projects by policing poaching and deforestation, or being policed for these 'crimes.' Key to this argument, and linked to research about neoliberal conservation, is that these arrangements reflect neoliberal governance projects in which the state's monopoly of violence is outsourced to a series of non-state actors.[4] In line with these trends, and with shocking frequency, transnational environmental NGOs like WWF finance (local or external) private military companies (Duffy, 2016; Loperena, 2016; Warren & Baker, 2019) who inflict violence in the name of securitizing nature for species survival.[5]

Securitization targeting local residents and the use of paramilitaries can, paradoxically, make conservation areas 'fertile ground' for il/licit activities, including deforestation (Dávalos, 2001; Ybarra, 2016). In other terms, organized criminal groups use nature reserves as spaces for smuggling humans, weapons, plants, and animals, taking advantage of the results of earlier 'green grabs' to expand their operations. In response to this trend, international conservation agencies have called for the recognition of narco-deforestation as a conservation emergency (Ballvé, 2019; McSweeney et al., 2014, 2017). Yet, in doing so, there is a risk of misrepresenting disempowered local inhabitants as narco-trespassers (Ybarra, 2016, critiques this trend) rather than recognizing the different ways locals are enrolled, often unwillingly, into criminal networks as the perpetrators or victims of violence.

Understanding how nature reserves are seized for il/licit economic activity in this complex context, and the local contestation that it prompts, requires that we expand the literature on green security beyond its primary focus on state borders. In particular, I call for increased attention to the effects of strict zoning policies implemented in conservation reserves several decades ago, arguing that they foster green securitization in a similar way to national or regional borders: by endeavoring to create an unpeopled territory, which, in turn, constructs new frontier spaces. In the case of the MBBR, the strict core area implemented in the year 2000 instituted a scaled land boundary in which the 'core' is allegedly human-free. This 'core' turned what was previously a socially regulated commons into a frontier region that is demonstrating similar green security dynamics to those that occur at state border parks.

My use of the term frontier is similar to Tsing's (2005) in her work on capitalism's destruction and re-construction of nature. Tsing (2005) defines frontiers as friction zones: human-made nature-edges that mark the tension between planned and unplanned spaces, legality and illegality. In a similar way, Peluso (2018) describes frontiers as socioecological limits that denote difference (often from previous frontiers). Following these insights, I suggest that a human-made frontier created by the MBBR's core-buffer designation encloses an objectified natural assemblage of oyamel trees and butterflies, emptied of the traditional human presence. While created in the name of conservation, this frontier is constitutive of 'extravagant new economies' (Tsing, 2005, p. 36) which enable drug-related accumulation and different forms of violence.

Ballvé (2019) has recently proposed the term 'narco-frontiers' to describe the political economy of these agrarian spaces in Latin America. Yet, Ballvé's '*narco*' wording erases the role of environmental NGOs in the crafting of such spaces.[6] Ybarra's (2016, p.

[3] In the case of some emblematic transnational peace parks such as Southern Africa's Kavango Zambezi, the largest trans-border park in the world, those national boundaries are selectively applied to contain humans while allowing plants and animals to move across state borders (Brunet-Jailly, 2017).

[4] Lombard (2016) observes that an "absent state" cannot be conflated with the lack of a state.

[5] Warren and Baker's (2019) Buzzfeed series on "WWF's Secret War" on communities confirms these scholars' and journalists' findings.

[6] Ballvé calls these spaces 'narco-frontiers': spaces co-produced by very similar processes to those I describe for MBBR. The term runs the risks of recreating a narrative of 'us' (state or para-military) and 'them' (*narcos*) that perpetuates violence.

199) lens of frontier spaces as 'blind passes' (*pasos ciegos*) can better capture the multiple overlapping forms of power and authority in violent conservation frontiers. Originally used to refer to places where people cross the Guatemala/Mexico border without being 'seen' by the state, blind passes are sites of extrajudicial violence, drug and human trafficking, and illegal logging, and may jeopardize both sovereignty projects and conservation objectives (Ybarra, 2016, p. 200). These insights also help draw analytical attention to how 'frontiers' or 'blind passes' are produced through a variety of different spatial arrangements and not just state borders. What these 'blind passes' have in common is how the narrative of risk and 'unpeopled landscapes' manufactures exception in ways that affect humans and nonhumans. Here I show how neoliberalization, international trade, and organized crime intertwine with the monarch reserve's core area to create a frontier zone. Experienced locally as a dangerous space, the frontier is simultaneously shaped by local and international conservation practice and regional change propelled by the creation of a transnational socio-economic bloc under NAFTA. The case of the MBBR thus confirms the findings of previous research that claims that organized crime, expanding upon its base in drug trafficking, can intensify deforestation (Dávalos, 2001; Durán et al., 2011; Honey-Rosés, 2009; McSweeney et al., 2014); however, it builds on them to show how conservation policy itself has also fueled organized crime economies, triggering cycles of both deforestation and violence. To provide context for this claim, the next section documents the expansion of organized crime in Mexico following neoliberal reforms.

3. Changing the monopoly of violence under a neoliberalized North America

The disappearance of Homero Gonzalez referenced at the opening of this paper was not an isolated incident, but part of a broader trend of forced 'disappearances' by organized crime across Mexico. While OC in Mexico is best known for drug trafficking, disappearance is a key strategy for expanding OC's power and profit locally, regionally, and internationally. According to Mexico's official count, Homero was one of 73,218 people declared as disappeared between 1964 and 2020. Yet, the latest official report from 2020 shows that 97% or 71,023 of these disappearances occurred after 2006— the year the Mexican Drug War began —suggesting that such disappearances are increasingly common and associated with the expansion of the drug economy and related businesses. Moreover, the two states that host the monarch butterfly in Mexico, Edomex and Michoacán, suffer the highest rates after the US-Mexican border states.[7]

What has enabled this rise in violence in Mexico and in these regions in particular? A comprehensive answer is that this increase in violence has been catalyzed by superimposed dispossessions in the Mexican countryside, most recently advanced by neoliberal policies. First, the privatization of *ejido* land and the neoliberal agricultural reforms under NAFTA have undermined the viability of agricultural livelihoods across the country. This leaves poor rural Mexicans, and especially youth, with few alternatives but to take part in the il/licit economy. The increased territorial control of organized crime, in turn, has allowed these organizations to directly target historically vulnerable groups without fearing legal consequences.

In addition to the influence of neoliberalism, this impunity must also be understood within the context of a series of much earlier dispossessions that shaped Mexican state formation: those of colonialism and their resulting influence on postcolonial rule. As observed in other postcolonial contexts, the Mexican state never succeeded in exerting direct control over the population through nation-wide, formal law enforcement. Instead, Mexico's post-revolutionary governance (PRI 1910–2000) occurred primarily through agrarian leaders and labor union mediators,[8] known as *caciques*, who facilitated just 'enough' state penetration (De Vries, 2002) to maintain the symbols of the state as a core entity. At the same time, these state brokers kept just 'enough' distance to also render the state invisible. This sophisticated (in)visibility (De Vries 2002, p. 923) of the Mexican state matters to the monarch reserve case because it explains how social property (*ejidos* and *comunidades*) and their agrarian leaders contained violence until the NAFTA reforms and the expansion of il/licit economies.

Homero Gonzalez was the leader of one of the *ejidos* within the reserve. As a social organization, Homero's *ejido*, and other *ejidos* and *comunidades,* are represented by a single leader (commissioner) who enacts the mandate of the communal organization that governs the social property. The social property's co-owners elect an assembly, including the commissioner. In Michoacán and Edomex, these assemblies have different degrees of democratic representation but it is well documented that leaders, such as Homero, contained and co-managed the monopoly of violence by serving the interests of the community while, in parallel, advancing their own interests by controlling key extractive activities (Pansters, 2018; Torres, 2009). The condition of a sole strongman[9] co-sharing the monopoly of violence with the state changed with three leading processes, all loosely connected to Mexico's neoliberalization. First, democratization. In keeping with neoliberal trends of decentralized governance worldwide, Mexico's 2000 elections introduced new elected positions at the local level, diminishing *caciques*' power in their positions as local state brokers. Second, economic neoliberalization. The NAFTA-related reforms revised the 1910 Agrarian Law, opening social property to the free (mainly real estate) market[10] (Fuentes Díaz & Fini, 2018; Herrera, 2019). Finally, expansion of the illicit drug economy. This expansion is rooted in multiple international factors that go beyond the scope of this piece, but it is critical to acknowledge two of them. First, drug economies tend to expand with other licit trades because the network for moving commodities already exists (Pansters, 2018; Watt & Zepeda Martínez, 2012). In this case, increasing economic integration under neoliberalism facilitated the expansion of the drug economies that are a main source of revenue for organized crime. Second, the US war on drugs that emerged as a response to these 'illicit' networks converted Mexico into a strategic point in the global drug economy. Specifically, the US war on drugs in Colombia, a major drug producing country, forced Colombian cartels to change their trade routes and rely on new distribution networks with less US interference. In this context, Mexico became the 'ideal' connector for trafficking drugs from Central America to North America and Mexican cartels the ideal facilitators.

[7] Remarkable effort has gone into the creation of the first public registry of disappearances, *Registro Nacional de Personas Desaparecidas y No localizadas* (RNPDNO), which can be consulted here (Comisión Nacional de Búsqueda, 2020; Secretario Ejecutivo del Sistema Nacional de Seguridad Publica, n.d.). The database accounts for disappearances from 1964 to the date.

[8] PRI started formally ruling in 1946 but their leadership began with the Revolution of 1910 and was uninterrupted until 2000 when the first modern democratic elections were carried out and Vicente Fox, an opposition leader, was elected president. PRI's was the longest rule by a single political party in Latin America.

[9] Torres' (2009) ethnographic work describes how *caciques* are part of a patriarchal governance system. Although each *parcela* (family land plot) is harvested by both the nuclear family and extended kin, the parcel's land use rights and representation on the *ejido* General Assembly could originally be transferred only to a son. This prevented women from having a voice in *ejido* governance until labor migration and democratic transition precipitated a push for changes.

[10] Before Mexico's Agrarian Reform (1992), PRI created a system of state controls, economic subsidies, and institutional support through specialized parastatal firms dedicated specifically to assisting rural farmers. This system ended with neoliberalization (De Janvry et al., 1997).

The expansion of the drug economy to Mexico offered an entry point to a new marketplace for *caciques* and agrarian leaders alike (Herrera, 2019; Torres, 2009). These changes lessened the state-*cacique* capacity to retain the monopoly of violence and generated more competition for regional control from organized crime actors no longer linked to the state but in opposition to it. As a result, amorphous forms of governing through violence developed, which enabled capital generation through il/licit activities (Mbembé, 2003, p. 33). Rather than OC seeking to replace the state, the regional *patron* (crime boss) usurps the state's power to 'kill and let live' as a means of advancing their organization's economic objectives. This, in turn, reshapes lines of authority and loyalty in ways that deepen local violence. Unlike *caciques*, organized crime groups operate transnationally through international alliances, and according to a system of ethics that is not —exclusively— motivated by the need to maintain local prestige (De Vries, 2002; Herrera, 2019; Pansters, 2018; Torres, 2009; Watt & Zepeda Martínez, 2012).

To confront the negative results of neoliberalization and the expansion of organized crime, the first three national administrations of Mexico's democratic transition opted, quite ironically, to declare "war" on a problem that their own neoliberal policies shaped.[11] Under President Calderón (2006–2012), Mexico ascribed to the war on drugs, which activated illegal weapons trade between the U.S. and Mexico, inadvertently strengthening the power of OC by arming them with deadlier weapons.[12] The ensuing confrontation has turned rural regions into battlefields. In the last two decades (2000–2020) alone, Mexico has reported 200,000 deaths by homicide and has averaged nearly 26 homicides per every 100,000 inhabitants over the last fifteen years (Torreblanca & Lara, 2019).

In short, violence is a strategy through which Mexican OC groups maintain control of the capital generated through their activities. The drug economy remains the central pillar of an il/licit economy that now also includes such other economies as human trafficking, disappearance, illegal logging, and coercion. Critically, those economies have also extended their reach into other 'licit' North American economies consolidated after NAFTA. This includes avocado plantations, for which the state of Michoacán is particularly famous. The rise of avocado revenues influenced the expansion of at least two side businesses: the extortion of plantation owners in exchange for OC's provision of 'security' services (Flannery Parish, 2017), and more recently the logging of oyamel forest to expand avocado plantations (Moreno, 2019).

Although avocado is a 'legal' crop, the avocado economy is, in part, sustained through illegal practices, such as the clearing of protected trees and extortion of plantation owners for protection. Critical to the monarch story is how changes in land use and control fostered by the reserve reduced the capacity of local communities to contain this transition to il/licit economies and their associated violence. While the MBBR communities have different socioecological histories that influence their degree of entanglement in this problem, they have all collectively lost their ability to manage land due to the nature reserve's restrictions. The result is that communities have less say in how to manage the forests (Hernández & Merino, 2004), converting what was once a socially managed commons into a frontier region marked by the expansion of il/licit activities. The next section tracks the process of converting the once socially managed forest into a violent frontier.

4. The Monarch Butterfly Biosphere Reserve. Context and current problematic

To understand how conservation has created a frontier space that allowed OC to proliferate in this particular region, it is important to first understand the spatial organization of the MAB and how it has reconfigured local land use and control over time. The first decree to protect the monarch's winter home was published in 1980 and revised in 1986. Prior to that, there were recorded legal efforts to institute logging prohibitions beginning in 1882 (López-García (2013) p. 172), with subsequent yet limited efforts throughout 1950–1970 (Boyer, 2005; Madrigal, 1967; Velasco Orozco Juan, 2001). The most significant changes came in 1980–1986 when the zone became a protected area, followed by key changes to the area's zoning in 2000 and 2006 when the reserve was designated under the Man and the Biosphere (MAB) program. This section narrates changes in the way land was governed and managed, in particular the adoption of a restrictive land use model that, as Hernández and Merino (2004) describe, allowed communities to "maintain ownership devoid of the rights that define ownership" (p. 305).

The reserve was first established between 1980 and 1986 on land encompassing a number of *ejidos* and *comunidades*, through a process that did not entail expropriation of these lands. As described earlier, the co-owners of social properties had long employed a traditional land use system by which locals inhabited and cultivated traditional food gardens (*milpa*) in the lower hills, while the mountains, where the monarchs overwinter, were managed as forest commons. While these commons were sometimes commercially exploited, this was done through community-managed forest enterprises that equally distributed revenues among each member of the *ejido* or *comunidad* (Bray et al., 2003; Merino, 2003). These land uses built on pre-colonial communal land arrangements, and were also shaped by subsequent colonial and postcolonial development. Downhill towns in the region today, including Zitacuaro, Ocampo, and Angangueo (see grey demarcations in map in Fig. 1), were all first colonial centres enforcing Indigenous labour at mines and later home to a cellulose industry based on the Oyamel forest. Further colonial land grabs of the upper mountains were attempted (both greens in Fig. 1), but were unsuccessful. Indigenous and mestizo communities managed to maintain land tenure, first without documents and after the Revolution with legal rights under the *comunidad* and *ejido* social property restitution.

While the creation of the monarch reserve in 1980–1986 and subsequent modifications did not change this model of ownership, land restrictions undermined the use of the forest commons and *milpa* system, reducing local land control, and precipitating changes in local livelihoods. The initial 1986 order instituted a restrictive protected area model, which presaged UNESCO's 'core' and 'buffer' land classification system enforced when the area was officially registered as a Man and the Biosphere Reserve between 2000 and 2006. A key component of UNESCO's Biosphere Reserve model, the core and buffer conservation model theoretically restricts any human activity in the core, with the exception of non-invasive research, while the surrounding buffer allows for sustainable economic activities. The UNESCO task group designed the core-buffer Biosphere Reserve model with the aim of creating universal standards for a global network of Protected Areas (ICCP, 1974; U.N. Environment. n.d). Laureen Elgert (2014) rightly observes that the MAB model indicates a partial union of nature

[11] The opposition party continued the neoliberalization process initiated under the two final PRI administrations.

[12] Felipe Calderón's war on drug traffickers was partially financed by the U.S. government through the Mérida Initiative, a counter-narcotic strategy which involves, among other forms of bilateral cooperation, an increase in the trade of weapons across the U.S.-Mexico border. The illegal flow of weapons from north to south is so consistent that 70% of the weapons seized by Mexican authorities as part of criminal investigations are U.S.-sourced (Government Accountability Office, 2016). A recent publication by the *Washington Post* shows how the most destructive weapons legally available in the United States are trafficked on a daily basis across the border to Mexico (Sieff & Miroff, 2020).

and society. It promotes human economic activity, yet still emphasizes their separation and the need to deal with each in "a separate, but ideally complementary manner" (p. 207). In this way, MAB's land classification into core and buffer zones is underpinned by a rationale about human development that, first, envisions nature and society as separate fields and, second, acknowledges human-land relations primarily as an economic activity in which 'nature' is a resource.

If MAB recognizes some human uses of nature, the original restriction in 1980–1986 was even more rigid in its vision of the human-nature binary. It sought to protect 16,000 ha with a *full ban* on human activities in both the core and buffer zones, undermining the communal land use system. This model was short-lived, and in 2000, the park was redesigned in a way that more closely aligns with MAB's core and buffer principles, but simultaneously further restricted local control over land. Two key changes occurred. First, the forest enclosure reintroduced certain sustainable economic activities inside the buffer-protected land, and a smaller number in the core. This change led to the final announcement of the Mexican overwinter habitat as part of UNESCO's Man and the Biosphere Reserve Program (MAB) in 2006. The map in Fig. 1 shows the 2000 demarcation that was later accepted in UNESCO's 2006 listing and persists today.

Second, and crucially, although the 2000 forest enclosure relaxed restrictions in the 'buffer zone,' it expanded the reserve's limits from 16,000 to 70,000 ha (Strahm & Rao, 2011), which generated considerable local upheaval. This perimeter is still in place and encompasses 72 existing social properties, 59 of which are *ejidos* (mestizo) and 13 of which are *comunidades* (Indigenous), as well as 21 private properties (López-García, 2013). Community forest use and management continue to be forbidden and were substituted by a Payment for Ecosystem Services (PES) program which aims to protect the core areas by paying cash for the 'services' provided by communities' unlogged forests. Only communities willing to participate and follow the conservation rules receive payments.

In addition to PES, the loosening of restrictions in the core zone has permitted the reintroduction of seasonal tourism. Tourism occurs at two sanctuaries located in the core area. Tourism is a significant, though unevenly distributed, revenue generator in the region, but also strongly impacts the forest (Brenner, 2009). While there are remarkable local efforts to operate tourism in an eco-friendly manner, there is no easy way to manage massive tourism in an impoverished region without an ecological footprint. In contrast with the hard work of international and national agencies to keep the core areas untouched by humans, mining has also been intermittently permitted in the buffer zone (Pskowski, 2019).[13]

4.1. Payment for ecosystem services [PES]. Context and problematic

MAB's core and buffer zoning was complemented by the introduction of economic 'incentives' to protect core forest through Payments for Ecosystem Services (PES) initiated by Fondo Monarca (FM) in 2001. FM gathers donations from WWF and Fundación Slim, which are combined with federal funds[14] and allocated in the form of economic incentives. Recipients are *ejido* and *comunidad* members with land in the core area who fulfill the requirement of having 'conserved land.' PES became, and still is, a crucial aspect of the implementation, regulation, and monitoring of the core and buffer zones. In my interviews, personnel of FM acknowledged that the monarch PES program was a way to replace lost income and temper the social discontent associated with the repeal of communal logging permits active before the 2000 rezoning and expansion. Some of these communities had legal logging concessions to log their social property in the upper hill commons dating as far back as 1950. Research suggests that some did so through sustainable commons management (Hernández & Merino, 2004). While PES has alleviated some of the economic losses associated with the banning of communal forestry, it has also provoked social conflict.

One major consequence of PES has been a rise in community patrolling practices to crack down on illegal logging. These practices put community members at risk given the OC's expansion in the region and the role of armed groups in illegal logging activities. It is important to clarify that NGOs involved in PES such as WWF-Fondo Monarca do not *directly* pay local inhabitants to patrol the commons, but my ethnographic data show they have *indirectly* influenced the patrolling practice (likely knowing this would be the result of inserting cash flows). To understand this, it is important to appreciate the precarious nature of PES as a livelihood strategy, particularly in a context of increased illegal logging associated with organized crime. By 2015, for example, the distribution of PES funds was unreliable, and some years certain *ejidos* and *comunidades* were denied their conservation 'incentive' because they fell into the category of 'non-compliant actors.'[15] Communities with more than 3% of forest change on their core land did not receive the payments. Conservation experts withhold payments even when a community claims to be suffering from external logging. While there is public recognition of illegal logging (Gomez Rodriguez, 2020; SEMARNAT, 2019), WWF-Fondo Monarca still insists on "holding property owners accountable for *at least* [emphasis added] reducing degradation rates" (Honey-Rosés et al., 2009, p. 25). This exposes a key tension in the international conservation program: foreign and domestic actors are now holding communities accountable for protecting the forest, yet communities are increasingly unable to do so given how the reserve has undermined their communal management institutions and enabled violent actors to gain a foothold in their territory. In this context, residents are increasingly forced to take life-threatening risks to control illegal logging through patrols in order to receive PES payments.

To the date, there is no public acknowledgement that WWF/FM's zoning and PES program promotes violent patrolling to protect trees in the core regions. This is despite the fact that the increase in confrontations with OC is so well documented that Michoacán and Edomex are frequently classified as Critical Forest Zones[16] by Mexico's Federal Environmental Agencies. These federal data corroborate what community members expressed in my fieldwork seasons. Violence increased with the reserve restrictions and PES commoditization of nature, yet this is not primarily due to

[13] Grupo Mexico, the largest mining company in the country, bought older mining concessions and although the group has a reactivation permit, to this date, their operation is still paused.

[14] Among FM's sponsors is Carlos Slim's Foundation. Slim is one of the world's richest entrepreneurs and is an active promotor of neoliberal policies in Mexico such as the deregulation of the communications industry. Fundación Slim now protects six other regions in Mexico through the PES model.

[15] According to conservation experts, it should work as follows: "Properties receive an annual payment of US$ 18 m^{-3} of forfeited timber, according to extraction volumes specified in their management plan. The management plans were based on 10-year cycles, so, at most, the fund anticipated compensating landowners over a period of 10 years for timber extraction. The second payment is made in December of each year, irrespective of logging rights and instead based on the area of conserved forest. All property owners with land in the core zone are eligible for the second conservation payment. Since property owners with logging permits are eligible for two payments a year, and those without logging permits are only eligible for one, out of fairness, it was decided that property owners with access only to conservation payments were to be paid at a higher rate of US$ 12 ha^{-1}, while property owners forfeiting logging rights would receive US$ 8 ha^{-1} until they stopped receiving June payments for forfeited timber rights" (Honey-Rosés, 2009, p. 123).

[16] PROFEPA's database covers 1997-present. Combined, the states of Michoacán and Edomex have a total of 11 critical zones. An additional national-level study comparing the critical zone indicators with the creation of conservation reserves would help further confirm the suggested correlation between conservation and OC infiltration.

intra-community confrontation but due to OC taking advantage of this crafted frontier region and carrying out violent practices in the communities. Although these communities want a conserved forest just as much as WWF and FM, the imposition of the category of 'non-compliant actors' pushes towns to enforce surveillance and take justice into their own hands. In sum, in this case, the PES and their withholding re-creates an 'us' and 'them' narrative that fuels the conditions for local violence. For example, locally, and even in the scholarly literature, there is a tendency to link deforestation to those who are landless and lack the social power that membership in *ejidos* and *comunidades* may still provide. These people are sometimes referred to as '*avecindados*' (which translates as 'landless neighbors'). *Avecindado* is increasingly used as a derogatory label (Honey-Rosés, 2009; Navarro-Olmedo et al., 2016) that stigmatizes landless or poor individuals as the new 'narco-trespassers'—people with few environmental ethics who vacillate between licit and illicit activities with ease. *Avecindados* cannot receive PES because they do not own land, highlighting the potential of PES to deepen existing social tensions. At the same time, economic incentives are not the only factor that motivates local groups' engagement in conservation practice. The next section presents the traditional ecological ethics that underpin local forest conservation beyond a neoliberal focus on incentives and services.

4.2. Sad trees and the abandonment of a ritualized communal forest.

In the context of PES, *ejidatarios* and *comuneros* would often share a different view of what a healthy monarch forest is than the view advanced by international and domestic conservation organizations. Residents explain how they have ancestrally coexisted with the forest through ritualized practices that connect The family *milpa* garden with the upper oyamel forest that the monarchs prefer.[17] These explanations show a distinction between the socially-permitted activities in the upper forest and the lower forest. In contrast to the restricted upper forest, the lower hills are dedicated to *milpa,* the family corn garden. It was, until recently, the core of family reproduction and kinship ties, even when families migrated, and represents a more relaxed, though still ritualized, space.[19] The upper forests are ritualized commons that require ceremonies to recognize the forest's role as provider of water, timber, non-timber plant sources, animals to hunt, and mushrooms for foraging (Bello-González et al., 2015; Castilleja et al., n.d.; Farfán, 2001; Farfán et al., 2007; Tirel, 2013). There is historical documentation from many reserve communities that disregarding this social obligation can bring misfortune (Carreón & Camacho, 2011).

Both upper hill and *milpa* rituals reveal the convergence between 'nature' and other facets of life. In the words of the local historian Sánchez (2006), the interactions with the natural environment "do not occur within the framework of independent or *separate dimensions* [emphasis added]; utilitarian relations, worldviews and knowledge run concurrently" (p. 53). In sum, recognition of the sacred energy that flows between the *milpa* and the upper commons does not conflict with what Sánchez terms the "utilitarian" uses of the forest. This is a ritualized view of the two ecological niches that, I contend, contributes to protecting overwintering monarchs.

Unlike MAB'S designs, the differentiation between the upper and lower hills is not conceptualized and lived as a rift, but as an uninterrupted co-habitation across different ecological niches. Research in the reserve suggests that these community practices continue to support forest conservation despite pressures (Boege, 2008; Challenger, 2003; CONAPO, 2000 González et al., 2012; Hernández & Merino, 2004; Lugo, 2009; Luna, 2014; Luna & Hernandez, 2016 Martín, 2001; Murillo, 2009; Sánchez, 2003; Toledo, 2014). An analysis of these studies indicates that the biggest determinant of a conserved or devastated forest in the region is the presence of strong multi-scaled governance institutions (local, regional, federal) (Durán et al., 2011) and solid community self-regulation in the Ostrom sense (Hernández & Merino, 2004). These findings, along with the persistence of local environmental ethics, challenge assertations that social property serves as an obstacle to effective resource management (Honey-Rosés, 2009) and adds perspective to the Ostrom-inspired studies of Hernández and Merino about successful cases of community forest management (Boyer, 2015; Hernández & Merino, 2004; Merino, 2003). Data suggest that institutions and norms matter more than ethnic identity for conservation outcomes, as they show that mestizo and Indigenous communities are equally likely to manage or degrade the forest. This may also reflect the fluent and dynamic nature of these identities.

While more research is needed to understand the different factors shaping (un)sustainable resource management in diverse communities, the above discussion suggests that local norms, rituals, and ecological ethics surrounding forest use in the upper region motivate activities to preserve forests that are rooted in appreciation for their sacred value and a sense of reciprocity with the nonhuman forest inhabitants that go beyond economic incentives. These are the ecological ethics that the MAB's model disregards. By imposing a binary global classification of core and buffer upon a land that has been managed, shaped, and valued according to a non-dual view of nature, the MAB program has created a frontier region that rifts an ancestral ecological practice. It has created a putatively human-free land that is now 'fertile' ground for organized crime (Fig. 2).

4.3. Communal vigilance in a 'no humans' land

Research points to another consequence of international pressure on the communities who ancestrally inhabited monarch land. Conservation has prompted a forced disregard of land where monarchs are not present. People often expressed that the core areas where butterflies do not overwinter are now "full of trees, yet *sad trees*." They explained that trees need human intervention to be "healthy" and that the lack of this activity turns them into unhealthy (attacked by plagues), and thus sad, trees. The other certainty is that OC is grabbing that land and coercing the villagers. As I have outlined, the origins of illegal logging in the region are complex, but today revolve heavily around avocado plantations. As explained by Honey-Rosés (2009), the precise moment when illicit lumber turns licit is difficult to trace given how the industry is shrouded in corruption and violence. Once at the mill, the paperwork to transform that lumber into 'legal' lumber is created. On top of this, with the right permits and correct 'political connections,' once land has been fire-burned, it may be reclassified from a protected area into one zoned for avocado plantations[19] (Gomez Rodriguez, 2020; Moreno, 2019).

In this context, communities conduct 'community *rondas*' (walks) to guard their forest. Self-defense groups are common in Mexico but particularly present in Michoacán and are on the rise after the war on drugs. These are complex groups to analyze and accurately classify without extensive fieldwork. However, current research in Michoacán suggests that *defensas comunitarias* are groups of neighbors, usually armed, but not necessarily, and some-

[17] Joslin (2020) reports a similar tradition in which mountain peaks are socially regulated but not as fully inhabited as lower hills.

[18] There is a trend of some households abandoning *milpa* culture as their members seek work outside of the community, either domestically or internationally.

[19] The environmental law (*Ley de Desarollo Forestal Sustentable de Michoacán*) stipulates that this land reclassification can only occur 20 years after a fire occurs. However, in reality, the papers are granted almost immediately.

Fig. 2. Harvest Ritual at the Monte Alto, MBBR (Photography by AH, 2017, rights granted by the photographer).

times opposed to the state. This possible opposition to the state stems from, among other factors, ethnic identities seeking self-governance according to Indigenous laws or the inability of the state to provide security to them and their forest. Although this is a traditional practice, its recent rise responds to the loss of authority of regional *caciques* due to neoliberal decentralization, and the reserve's annihilation of the community-managed forest. Their greater firepower is enabled by the increased accessibility of weapons in Mexico enabled by growing north-south trade and the inadequate scrutiny of goods traveling southbound across the US-Mexico border (Government Accountability Office, 2016).[20]

For the MBBR, it is essential to note that *defensa comunitaria* is a historic practice continued mostly by males of Edomex's and Michoacán's forest communities who conduct unarmed rounds in the commons as part of a community service known as *faena* or *rondas del buen orden*: unpaid community work organized through the *ejido or comunidad* to reciprocate the forest resources. Communities accustomed to this practice were successful in conserving the forest long before the MAB restrictions. Nonetheless, my data suggest that the community walks operating today, although based on *faenas* or *rondas*, are now organized for combating OC. The walks are now dangerous because villagers may be armed, and they may want to confront another group that has logged their commons to maintain accountability vis-à-vis the PES program. There is also the increasing risk of confrontations with OC who today log trees in plain sight (Honey-Rosés, 2009) and who will retaliate with automatic weapons or forced disappearance. Despite the reserve's restrictions and the likelihood of highly risky scenarios, some communities keep visiting the upper forest to perform rituals and to patrol the forest. The ritual practices, however, are declining due to the danger and the prohibitions. In contrast, there is an increased OC presence that takes advantage of conservation restrictions in core areas to extend their operations. This calls attention to the forms in which organized crime and neoliberal conservation have come to co-exist in the Monarch Butterfly Biosphere Reserve.

5. Conclusion

The paper discusses the context in which the MBBR became a more violent zone lacking self-governance capacity due to the MAB's core and buffer land classification and neoliberal reforms. It provides evidence of a precarious setting in which *ejidatarios* and *comuneros* are trapped in the perils of land dispossession and il/licit trade. Restrictions that have forced communities to abandon the core land's traditional uses have nurtured a cycle of declining community presence, granting space to OC operations in the reserve's core area. Homero Gonzalez's story presented at the beginning of the paper first called my attention to these shifts, and in some ways encapsulates the story of the MBBR. As an old-style *ejido* leader, Homero first battled the reserve's creation because it dispossessed *ejidatarios*. Through the years, however, he changed views and found a place to keep leading the agrarian community by protecting monarchs and opposing illegal deforestation within the limits of neoliberal measures such as PES and the decline of the *cacique*-state governance model. His disappearance illustrates how an *ejido* leader achieved adaptation to the neoliberal management of nature, but was ultimately unable to thwart the expansion of the drug economy and its violence in the conservation area. Tragically, Homero's body was eventually found, triggering more local controversy and tension. The death of another forest guardian a few weeks after Homero's signals that criminal activities are on the rise inside the reserve. Fewer rituals, loss of community-managed forests, and increasingly risky community walks in the commons contribute to a rift within the landscape that serves to expand il/licit economies. With both increased violence and communities' decreasing ability to sustainably manage resources and resist illegal logging, this new frontier region is riskier for humans, trees, and butterflies alike. In unequivocal terms, *ejidatarios* and *communeros* like Homero are paying, with their lives, the risks imposed by a conservation program that fails to address the problem at a North American level. This setting has profoundly changed the traditional human-forest reciprocity and undermined the once strong community capacity to sustainably manage forests. As such, the findings highlight an urgent need to recognize the linkages between conservation policy, il/licit economies, and drug policy, with a view to transforming them.

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[20] A successful case (Del Conde, 2015) in the region in stopping deforestation and violence through these self-defence groups is Cheran, an Indigenous community who managed to recover their forest from OC after years of intense confrontation, and subsequently established a new Indigenous government.

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