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# Eco-xenophobia among rural populations: the Great-tailed Grackle as a contested species in Guanacaste, Costa Rica

Deena Dinat <sup>a</sup>, Alejandra Echeverri <sup>b</sup>, Mollie Chapman <sup>b,c</sup>, Daniel S. Karp <sup>d</sup>,  
and Terre Satterfield <sup>b</sup>

<sup>a</sup>The Department of English Language and Literatures, University of British Columbia, Vancouver, Canada;  
<sup>b</sup>Institute for Resources, Environment and Sustainability, University of British Columbia, Vancouver, Canada;  
<sup>c</sup>Department of Geography, University of Zurich, Zürich, Switzerland; <sup>d</sup>Department of Wildlife, Fish, and  
Conservation Biology, University of California, Davis, CA, USA

## ABSTRACT

The meanings attached to animals speak to context-specific socio-political differences that are crucial to the success of conservation and wildlife management programs. The social construction of animals, however, remains underrepresented in wildlife management scholarship and practice. We conducted 31 semi-structured interviews with farmers and urbanites, and analyzed the case of the Great-tailed Grackle (*Quiscalus mexicanus*) in Guanacaste, Costa Rica. People had negative perceptions of this species that revealed three themes about its labeling: (a) the bird as foreign; (b) the bird as a threat to livelihoods, the nation, and other species; and (c) the bird as a criminal. We have identified this phenomenon as an example of eco-xenophobia, which describes how non-human species come to be classified as foreign or as “other” and not the “rightful” occupants of a territory. We concluded that the narratives associated with animals cannot be ignored, especially when species become focal in wildlife management and conservation efforts.

## KEYWORDS

Human-animal studies; speciesism; social construction of animals; eco-criticism; biodiversity conservation; wildlife management; Great-tailed Grackle

## Introduction

The social dimensions of biodiversity are a central topic in discussions about conservation and wildlife management (Bennett et al., 2017; Chan et al., 2016; Díaz et al., 2014). Increasingly, academics and practitioners assert that the conservation of biodiversity extends well beyond an analysis of the ecological components of ecosystems (e.g., endangered species or threatened landscapes), and thus should consider people’s values, perceptions, and attitudes toward biodiversity. Local communities have also been recognized as key players in conservation and wildlife management decisions because their perceptions of biodiversity and conservation programs can lead to the success of conservation actions (Smith, Veríssimo, Leader-Williams, Cowling, & Knight, 2009).

To date, research on human perceptions of wildlife in conservation and resource management contexts has mostly focused on endangered, threatened, and/or charismatic species (e.g., wolves [Browne-Núñez, Treves, MacFarland, Voyles, & Turng, 2015], elephants [Browne-Núñez, Jacobson, & Vaske, 2013], sea otters [Echeverri, Chan, & Zhao, 2017],

**CONTACT** Deena Dinat  [deena.dinat@alumni.ubc.ca](mailto:deena.dinat@alumni.ubc.ca)  The Department of English Language and Literatures, University of British Columbia, 1873 East Mall BC V6T 1Z1, Vancouver, Canada

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island birds [Veríssimo, Fraser, Groombridge, Bristol, & MacMillan, 2009], mammals as “Cinderella species” “that are aesthetically appealing but currently overlooked” [Smith, Veríssimo, Isaac, & Jones, 2012, p. 205], and chimpanzees [Schroepfer, Rosati, Chartrand, & Hare, 2011]). This type of research has largely sought to promote pro-wildlife human behavior, improve the media’s portrayal of biodiversity, or better inform the design of conservation campaigns (Clayton, Litchfield, & Geller, 2013; Smith, Veríssimo, & MacMillan, 2010). Many of these research endeavors have used quantitative methods to assess preferences, attitudes, and perceptions toward species, and have at times neglected the socio-cultural and historical contexts that underpin such perceptions (but see Manfredo, Teel, & Dietsch, 2016 for a quantitative view of such endeavors).

Many researchers have stated that human perceptions of biodiversity are highly dependent on geographic and socio-cultural contexts because people view species in reference to their cultural worldviews and linguistic frames (Arluke & Sanders, 1996; DeMello, 2012). In this sense, we classify non-human animals by making use of our cultural frames, which involves assigning them spaces (Herzog, 2010). For example, we classify animals as “circus animals,” “pet animals,” “farm animals,” “wild animals,” “invasive animals,” and so on. Importantly, these classifications are non-trivial and often politically charged (Adams, Donovan, Dunayer, Birke, & Kheel, 1995). They reveal assumptions of what biodiversity was in the past and what it ought to be in the future, as well as how animals deserve to be treated (Nagy & Johnson, 2013). Moreover, perceptions of biodiversity in a given time relate directly to the “shifting baseline syndrome” introduced by Pauly (1995), which suggests that humans adapt the notion of their environments to the characteristics of contemporaneous environments because of distorted memories or loss of intergenerational knowledge. Indeed, species have been introduced to non-native habitats for millennia, but with time and through cultural traditions, non-native species become part of the “normal” state of systems in people’s minds (Clavero, 2014). Therefore, differences in views of the same species can vary greatly across space and time, with important implications for conservation. For example, elephants are often considered circus and entertainment animals in Latin American countries, yet are strongly related to religion in Sri Lanka, Burma, Thailand, and Cambodia, and exterminated as vermin in China (Sukumar, 1989).

Although subfields in the social sciences and humanities have studied these socially influenced perceptions of animals (e.g., Borkfelt, 2011; Haraway, 2008), the fields of wildlife management and conservation have paid little attention to how animals are socially constructed. We argue that more attention needs to be given to the cultural and social construction of animals in conservation and management contexts because such constructions speak more broadly to the underlying economic, political, social, and cultural issues that can influence or impact conservation program implementation, outcomes, or success.

The few examples that have examined the social construction of animals in conservation contexts include the role of charismatic or endangered species, which are often understood as invoking positive emotions (Anderson, 2003; Bowen-Jones & Entwistle, 2002; Myers & Russell, 2003). Less attention has been given to species that are viewed negatively (but see Douglas & Veríssimo, 2013; Leong, 2009). For instance, how do we classify animals as invaders or pests, and how do these classifications influence people’s perceptions of other (often similar) animals? Human perceptions of pest animals have often been portrayed as irrational, and classifications of “invasive” animals have been described as largely arbitrary (Herzog, 2010). Some animals thrive in cities and backyards,

and often proliferate in areas such as under kitchen sinks. Cockroaches, carp, pigeons, coyotes, moths, cormorants, and many other species often become vilified by humans as “vermin” and “pests” in human-dominated spaces (Nagy & Johnson, 2013). Thus, we see an opportunity to investigate how animals that are viewed negatively come to take on these associations and stigmas.

Specifically, we explored the case of the Great-tailed Grackle (*Quiscalus mexicanus*), a habitat generalist species that thrives in residential areas and agricultural landscapes. Historical archives from sixteenth-century pre-Hispanic Mexico documented that the Aztecs introduced this species to Mexico (Haemig, 2014). The Great-tailed Grackle was native to mangroves and estuaries from Central and South America prior to the 1900s, but has rapidly expanded its range northward to Mexico and the United States, and southward to the coast of Colombia toward the interior of the country (Stiles & Skutch, 1989; Wehtje, 2003). This species is tremendously adaptable to human environments, as it thrives with urbanization and climate warming (MacGregor-Fors, Vázquez, Vega Rivera, & Schondube, 2009). Increased urbanization seems to have created a stable habitat where Great-tailed Grackles can breed with fewer predators present (Wehtje, 2003). Moreover, given that this species is tropical in origin, it is affiliated with warm temperatures. Thus, a major restriction of its range expansion is cold temperatures in the winters, although with climate warming it has been able to persist in areas that were previously restricted to them. In the United States alone, this species has expanded its breeding range by 5530% between 1880 and 2000, and now can winter in North America (Wehtje, 2003).

The Great-tailed Grackle’s diet is based on animal and plant-based products, such as berries, larger fruits, ticks plucked from cattle, eggs and nestlings of other birds, and carrion (Stiles & Skutch, 1989). Despite the lack of recent life-history studies conducted on this species, arthropods appear to make up more than 75% of the Grackle’s diet (Teather & Weatherhead, 1988). Grackles have also been observed feeding on small vertebrates and eggs (Blankinship, 1996; Hansen, 1976). Moreover, Great-tailed Grackles have been shown to feed on crops; for instance, they eat grapefruits in Texas (Johnson, Guthery, & Koerth, 1989) and corn seedlings in Mexico (De Grazio & Besser, 1970).

We focused on Guanacaste, a northwestern province in Costa Rica, and evaluated human perceptions of the Great-tailed Grackle in this region. We sought to explore the following research questions: (a) how do local farmers and urbanites in Guanacaste perceive and construct perceptions of the Great-tailed Grackle, (b) how do their perceptions of this species fit different discourses that predominate in Costa Rica (e.g., agrarian, conservation, ecotourism), and (c) what themes emerge from their narratives about the Great-tailed Grackle? More specifically, in what ways, if any, do these themes highlight the complexities of rural migration and the disruption of farming livelihoods, and what might they reveal about perceptions of insecurity and violence among farmers?

### ***Costa Rican National Identity: Race and Otherness in Relation to Nicaragua***

Our interpretation of the ways in which non-human animals get negatively categorized in Costa Rica requires an understanding of the formation of a Costa Rican national identity. The process of distinguishing a Costa Rican “self” from a Nicaraguan “other” speaks directly to the concept of the nation as an “imagined community” and suggests that the nation is constituted as a discursive formation, primarily through the experiences of

participating in shared narratives (Anderson, 1983). Sandoval-García (2004) argued that Costa Rica has imagined its national character in relation to its neighbor Nicaragua, constructing a dichotomy of Costa Rican “self” and Nicaraguan “other.” The key features of Costa Rican national identity “highlight an idyllic sense of the past, a ‘white’ population and recently a prosperous middle class and stable democracy,” whereas key features of the Nicaraguan “other” are “a turbulent political past, dark skin, poverty, and nondemocratic forms of government” (Sandoval-García, 2004, p. xiii-xiv).

Costa Rica’s image of itself is constructed around the values of “democracy, peace, and social equality” in addition to a claim of being the “‘whitest’ population in Central America as well as the best Spanish speakers... [whereas] Nicaraguans have been historically represented by their ‘different’ Spanish accent and dark skin” (Sandoval-García, 2004, p. 62). Costa Rica’s claim to a white identity is one that has entailed “suppressing the settlements of Indigenous Peoples, blacks, and inhabitants of the coasts” (Sandoval-García, 2004, p. xvi). In contrast, Nicaragua is associated with blackness and indigeneity, a sense confirmed when in 1987, Nicaragua became “one of the first Latin American countries to adopt multicultural citizenship reforms that assigned special collective rights to *costeños*, the black and [I] ndigenous inhabitants of its Atlantic Coast” (Hooker, 2005, p. 14).

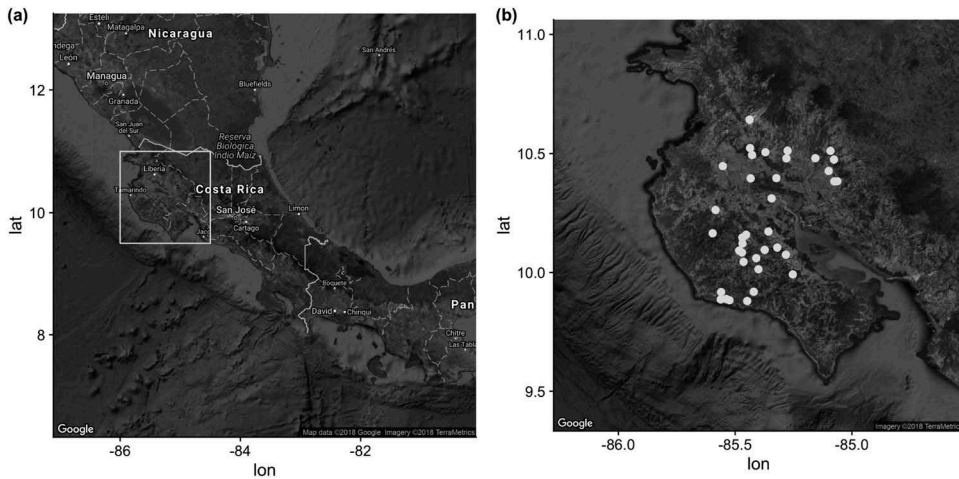
Nicaragua’s history of conflict further contributes to its othering in the Costa Rican imaginary. As a result of the unrest preceding and during the Nicaraguan Revolution and Contra War, Costa Ricans have formed a national identity around the perceived danger posed by Nicaraguan migrants fleeing both war and economic crises. The perceived difference in the two national identities is especially stark given Costa Rica’s decision to abolish its military in 1948. Fears of violence have also been stoked, in part, by the Costa Rican media’s representation of “Nicaraguans as a national threat... [through associations with] disease, ‘immigration,’ border conflicts, and criminality” (Sandoval-García, 2004, p. 61). In sum, the Costa Rican nation has come to stand in for a series of ideals – whiteness, stability, uniqueness – everything that Nicaragua is thought to lack and therefore threaten if its people migrated to neighboring countries.

As Sandoval-García (2004) argued, Nicaraguans do not merely function as “foreigners” in the national imagination of Costa Rica. Instead, Costa Rican national identity is directly formed by the Nicaraguan other, an identity marked by a complex combination of racial, linguistic, and political differences. We raised the question as to whether this dynamic informs an eco-xenophobic construction of the Great-tailed Grackle among rural populations in northern Costa Rica, and offers a means for understanding why the Great-tailed Grackle is demonized in some areas such as Costa Rica, while celebrated in others such as the Atlantic coast of Colombia.

## Methods

### Study Area

Our study focused on the Nicoya Peninsula in Guanacaste, a province in northwest Costa Rica (Figure 1). Tropical dry forests and wet forests encompass the region (Calvo-Alvarado, McLennan, Sánchez-Azofeifa, & Garvin, 2009). Guanacaste has historically been dominated by agriculture and has a tradition of extensive cattle ranching (Morales Zuñiga, 2011). Now, tourism dominates much of the coast, and large farms of sugar cane,



**Figure 1.** Map with the location of The Nicoya Peninsula. The left panel (a) indicates where the peninsula is located relative to the country as denoted with the white box. In the right panel (b), the white dots indicate the sampling locations of the farms we visited, located near the major towns in the area (e.g., Liberia, Cañas, Bagaces, Nicoya, Hojancha, Nandayure, Sámará, Filadelfia, Santa Cruz, Curime).

melon, rice, and other crops occupy the interior lowlands. In higher areas, smallholders engage in extensive cattle ranching along with some subsistence agriculture and gardening (e.g., corn, beans, vegetables, chickens). There are two primary types of immigrants to the peninsula: (a) wealthy landowners, often of Spanish descent, whose haciendas evolved into the current large corporate farms in the lowlands of the Tempisque river valley, and (b) Costa Rican small-holders from the highlands around San José who bought larger holdings in the mountains of Guanacaste by selling a few hectares of land in the San José highlands. Guanacaste is an appropriate place to evaluate people's perceptions of animals because conservation and ecotourism discourses have predominated in Costa Rica's recent history, and have yielded a widespread awareness of associated biodiversity (Vivanco, 2006). Moreover, the region is experiencing a transition from an agrarian economy to a service-based one (i.e., ecotourism) (Morales Zuñiga, 2011), thus presenting a unique opportunity for evaluating how perceptions about animals follow social, economic, and environmental transitions.

## Interviews

We conducted semi-structured interviews with open-ended questions to understand human-bird relationships. Specifically, we interviewed 31 farmers and urbanites about: (a) their opinions of different birds (e.g., "Are there particular birds that you like or dislike?" "Can you please tell me why you like or dislike them?" "What are the characteristics of these birds?"); (b) their views on appropriate relationships between people and birds (e.g., "Do you feel responsibility toward birds?" "Do you believe birds deserve respect?"); and (c) practices regarding birds (e.g., "How does a person who respects birds act?" "How should one treat, use, or care for birds?"). We also specifically asked respondents to anthropomorphize different



types of birds. We selected several birds discussed and asked: “if this bird were a person, what kind of person would it be?” Anthropomorphism is regarded as an important way in which people make sense of interactions with the non-human world and it has emerged in the literature as a useful tool for conservation (Root-Bernstein, Douglas, Smith, & Veríssimo, 2013). Thus, a question about anthropomorphizing different species seemed appropriate to elicit narratives of human-bird relationships.

All interviews were conducted from May to July of 2016 in Guanacaste. Participants were identified by partnering with local organizations (e.g., Fundación Nicaragua, Asociación cámara de ganaderos de Nandayure). We used non-proportional quota sampling to reach a variety of different farm sizes, women and men, and people with different socio-economic status. Interviews were audio recorded and then transcribed by a local research assistant and coded using NVivo software for theory-driven and emic derived themes. All interviews were conducted in Spanish, and we translated the relevant sections to English. Data analysis, including coding, was performed by a bilingual co-author of this publication, so back-translation was not required.

## Results

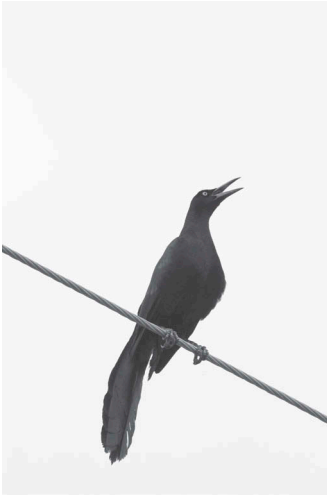
Although interviewees expressed opinions about a variety of birds, these were almost exclusively positive except for the case of the Great-tailed Grackle. In many cases, respondents said they liked all birds; yet when prompted in the interviews about the Great-tailed Grackle, which in Guanacaste receives the local name of “Zanate” (coming from the Nahuatl word “Zanatl” used to name the bird), they most often had negative opinions. The Great-tailed Grackle was by far the most salient bird discussed in the interviews, with rich stories, ideas, and metaphors described by interviewees. For example, the following quote highlights a common pattern whereby the respondent said they liked all birds, but then made an exception for the Great-tailed Grackle – the one bird with no place in the region or the ecology:

*“I think that humans have to protect them all. Because they are good, they are beautiful. Although I don’t like the Great-tailed Grackle at all. But we must take care of all the birds because [they are] part of all the nature that God left us... every one has a place in the ecology, in the system of each region, they must be [there] to do good... all of the birds except the Great-tailed Grackle, I don’t like that one at all.”* (Interviewee 2, urbanite)

The strong way in which the Great-tailed Grackle was negatively portrayed led us to focus on this bird and its relationship with the people in Guanacaste. To this end, three key themes emerged: (a) the Great-tailed Grackle as a foreigner; (b) this species as a threat or harm; and (c) the perception of the bird as a criminal in response to our prompts (Figure 2).

### Theme: Foreignness

Nine of the 31 respondents described the Great-tailed Grackle as a foreigner. For example, in the following quote, the Great-tailed Grackle was described as coming from Nicaragua, a somewhat racializing term to the extent that Nicaraguans are often seen pejoratively relative to Costa Ricans.



### FOREIGNNESS

*"The famous Grackle, they say that it comes from Nicaragua. In fact, here we had a bird that was similar to the Grackle, but it has a different beak, and the Grackle came to invade all the other birds...."*

### HARM

*"The Grackle is a pest. It damages the nests of the other birds, we have seen it eating even its own sons. And they also cause damage to the rice, they take out the rice. We did not have grackles around, and now there are many. We don't see them in the forest, only close to the house and then they go to the rice crops"*

### CRIMINALIZING THE GREAT-TAILED GRACKLE

*"Grackles are very destructive, they get here and eat the eggs of other birds. [If the Grackle were a person, it would be like someone] who is bad, they would be like the narcos "*

**Figure 2.** Examples of interviewee comments about the Great-tailed Grackle in Guanacaste. The main emic-derived themes of the local perceptions of the birds are bolded, and an example of the quotes that people expressed about this bird are noted. The photograph of the male Great-tailed Grackle was taken by co-author Daniel Karp.

*"... the famous Great-tailed Grackle, they say that it comes from Nicaragua. In fact, here we had a bird that was similar to that Grackle, but it has a different beak, and the Grackle came to invade all the other birds... In Nicoya, there is a place where all of those Grackles sleep, and it is an issue, in front of the hospital there is a supermarket called Palí, and every day when the sun sets you can hear them all, I don't even know how many..."* (Interviewee 31, urbanite)

This interviewee specifically differentiated the "Nicaraguan Grackle" from a similar native bird that was presumably unproblematic. Considering our interviews with other people, we believe this respondent was referring to the Melodious Blackbird (*Dives dives*) when discussing the similar bird to the Grackle. The Melodious Blackbird is a smaller Icterid generally perceived as a bird that sings beautifully and causes no harm (Echeverri, Naidoo, Karp, Chan, & Zhao, 2019). Examples of opposite perceptions toward two native closely related species have been documented in Dominica where one species is perceived as majestic, whereas the other is viewed as a pest (Douglas & Winkel, 2014). The interviewee then described the Great-tailed Grackle as an "issue" in particular because of its large numbers, hinting at an invasion of sorts from neighboring Nicaragua.

Another interviewee also described the Great-tailed Grackle as Nicaraguan in origin, this time providing an extensive migration history and speaking about predation and how this bird poses threats to other birds that are native and important to them. For Costa Ricans, birds are an important part of their lifestyle. For example, over 150,000 parrots are kept as pets in Costa Rican households (Drews, 2003):

*"[the Great-tailed Grackle] didn't exist in this region. It came to Costa Rica around 60 years ago. It came from Mexico, moved to Nicaragua, from Nicaragua it moved to La Cruz, Liberia, and now we have them here [in Nicoya]. They are even in San José. That bird is the worst [thing] that can exist... It is from the family of the crows, and you know that the crows are smart. So, the Grackle is very smart and harmful. For example, when I put out the food for the dog, the Grackles*



*come and they take it, then they put it in the dog's water so that it becomes softer [for them to eat it]. Also, if you are going to plant your crops, a friend of mine who planted corn said that he had to come back because the Grackles were behind him. He said that he was planting and every seed he planted, the Grackles would dig out. And he would scare them, and they would come back... [it is impossible to plant], if you add poison to the corn, a Grackle eats it and dies, and the other Grackles come to see what happened, and then they don't come, they are very smart. They have another problem, they are not a bird from our region, so when they are hungry and they can't find food, they go to the trees and eat the eggs of the other birds, so we have fewer birds because of them. [The Grackle] is harmful, it is not from here, [people] should never take animals from one place to another, and that bird came from North America, it is not Central American, it is the worst that can exist." (Interviewee 23, farmer)*

A further problem highlighted here with the alleged migrant bird is "its intelligence," which has also been discussed by academic biologists as they refer to this species' behavioral flexibility when discussing their foraging behaviors in experimental novel conditions (Logan, 2016). Here, the Great-tailed Grackle is tricky, getting around the barriers that farmers attempt to place in its way (poisoning the corn seeds).

In another interview, a respondent viewed the Great-tailed Grackle in a broadly positive light, noting its intelligence and beautiful song. However, these positive associations are still embedded in an understanding of the Great-tailed Grackle as inherently foreign.

*"In the region we have Great-tailed Grackles that are foreigners, [and came] from Nicaragua after the [Nicaraguan] war. They shot them there, and so they came to Guanacaste... and now they are all over Guanacaste, they are national birds. Sometimes they sing beautiful, they are very smart because they take care of their fledglings on the trees. They make their nests on the trees." (Interviewee 1, urbanite)*

### **Theme: Harm to Agriculture, Other Birds, and People**

The most common theme related to the Great-tailed Grackle was the harm it caused. Fifteen interviewees focused on the harm caused by the species to agriculture, such as digging out and eating seeds and seedlings, thus harming the farmers' crop before it has a chance to grow. These are described in the following quotes:

*"We have one that causes us problems. The Grackle comes, and digs out the seeds or the seedlings, we have many problems with it so we have to scare it off." (Interviewee 21, farmer)*

*"The Grackles are naughty when people are planting, they eat the plantation when it is sprouting, and they dig out the seeds." (Interviewee 20, farmer)*

*"The Grackle is black and that bird is harmful, it eats the corn, it eats everything, it is very harmful. We have too many of them." (Interviewee 17, farmer)*

In the above quotes, not only is the Great-tailed Grackle described in terms of the harm it does, but it is also said to be naughty, overly abundant, and black. In addition to agricultural harm, one participant had a story of the bird harming a child:

*"I wouldn't like to have the Grackle in my plot because it is very aggressive, it eats the eggs of other [birds], it makes a noise that I wouldn't like to wake up to in the mornings. I rather be awakened by the sound of a Long-tailed Manakin or a Clay-coloured Thrush, but not a Grackle because they get me to a mental state of confusion with that noise. When they are in groups they are very loud and very aggressive, extremely aggressive, and one time a Grackle attacked a kid*

*in my house, one of my relatives. It swooped over his head, perhaps it felt threatened because [the kid] passed by its nest, and it felt threatened and wanted to harm the kid with the claws and the beak.” (Interviewee 20, farmer)*

Here, not only did the Great-tailed Grackle swoop toward the child, but the bird did so intentionally and wanted to harm the child. This respondent also described the Grackle as causing a mental state of confusion due to the noise it makes. This is then compared to other birds that were perceived as making pleasant noises such as those to which the interviewee would want to wake up.

A third type of harm described is that of killing other birds that people liked, causing declines in their populations. Many respondents said that the Great-tailed Grackle destroyed the eggs and fledglings of other birds. For example:

*“[The Great-tailed Grackle] is a very intelligent bird, the problems associated with Grackles in the cities are caused because of their definite dominance of the place, they are very aggressive, I am not even sure if the Grackles themselves kill other birds, they kill the fledglings of others. Before, we had other animals in the cities, such as doves and parakeets, but now we only have Great-tailed Grackles and White-throated Magpie-Jays because both are very aggressive.” (Interviewee 6, urbanite)*

*“The Grackle is a pest. It damages the nests of the other birds, we have seen it eating even its own children. And they also cause damage to the rice, they take out the rice. We did not have Grackles around, and now there are many. We don’t see them in the forest, only close to the house and then they go to the rice crops.” (Interviewee 27, farmer)*

*“I think nobody likes that pest, here we have some chickens and we feed them, and you should see how the doves, and the native doves come, and also that Grackle. And if that Grackle sees that the doves have fledglings, they eat them, and [the Grackles] are very harmful to the agriculture, when one is planting [a new crop], one must watch out for them, because they eat the seeds of the corn, they dig out the corn.” (Interviewee 28, farmer)*

The Great-tailed Grackle is consistently described as aggressive and dominant, and even cannibalistic.

### **Theme: Criminalizing the Great-Tailed Grackle**

When asked to discuss the bird in relation to human characteristics, respondents anthropomorphized the Great-tailed Grackle as a criminal species. The bird was described as a delinquent, criminal, hunter, or “narco” (narcotics trafficker) with the associated qualities one might imagine for such a type of person (e.g., unfriendly, repugnant, rude, aggressive). This criminalization of the Great-tailed Grackle is in keeping with the ways in which the figure of the Nicaraguan other is criminalized in the Costa Rican national imagination. The association of Nicaraguans with criminality and violence is traced back to the end of the nineteenth century (Sandoval-García, 2004). Contemporary news media have continued the often sensational criminalization of Nicaraguans; delinquency is often understood as an “issue of nationality” rather than an expression of specific socio-political conditions (Sandoval-García, 2004). Example quotes for this theme included:

*“[If the Grackle were a person, it would be like someone] who is very serious, repugnant, not very friendly.” (Interviewee 8, farmer)*

*"[If the Grackle were a person, it would be like someone] who is the perfect delinquent."* (Interviewee 20, farmer)

*"[a person with the characteristics of a Grackle]... well, I think that is like everywhere where there are humans. [For example], I have a TV there, but [imagine one day] we are watching the news peacefully, and then [someone gets here] and tells me: please Sir, open your suitcase and look for the keys because we want to open your safe and take your belongings, and if you don't do it, well then, we will kill you... what do you think about that? I don't agree with that, we are all humans and we should respect each other."* (Interviewee 28, farmer)

*"Grackles are very destructive, they get here and eat the eggs of other birds. [If the Grackle were a person, it would be like someone] who is bad, they would be like the narcos."* (Interviewee 22, farmer)

*"[If the Grackle were a person, it would be like someone] who is destructive, because the Grackle harms all the other species, it drinks the eggs of other birds... they don't even like themselves, they kill themselves... [The Grackle] is very harmful, it would be like a hunter."* (Interviewee 26, farmer)

## Discussion

Understanding the social construction of nature and biodiversity, and the broader issues that emerge from these constructions is important for managing and conserving species because these constructions invariably reveal assumptions about the political and social realities happening in a locality (Haraway, 2008; Nagy & Johnson, 2013). Increasingly, conservationists and wildlife managers have recognized that the social dimensions of biodiversity are necessary for acquiring public support for their actions (Manfredo, 2008; Teel & Manfredo, 2010).

Eco-xenophobia, a term used by Rotherham (2010), describes the ways in which non-human animals and plant species have been classified as foreign, or as "other" to the citizens (and thus "rightful" occupants) of the nation-state (Gray, 2009). What we suggest here is that the labeling of the Great-tailed Grackle as a "Nicaraguan bird," a species that is foreign to Costa Rica, is not simply a geographical error; it rather suggests the complex ways in which concepts of nature are infused by nationalist and economic anxieties, and how those anxieties are projected onto the non-human world. In the case of the Great-tailed Grackle in Guanacaste, this process of "othering" has taken on a distinctly nationalistic and xenophobic valence. Costa Ricans have developed a strong dichotomy between the self and the Nicaraguan "other."

Nicaraguans are often perceived as "bellicose" and "revolutionary" by Costa Ricans because of their influence on the process and results of the Nicaraguan Civil War (Alemán, 2013). Although we cannot provide a complete description of this cross-border relationship, the nationalistic perceptions and entanglements are deep-seated and historically complex stories. This process is compounded by the fact that the Great-tailed Grackle is, in fact, native to Costa Rica (as well as Panama and Colombia) and is expanding its range as an "invasive" species in Mexico, the United States, and further south in Colombia (MacGregor-Fors et al., 2009).

The labeling of the Great-tailed Grackle as either "foreign" and/or in a negative light in several interviews quoted here is also in keeping with other cases of eco-xenophobia (see also Echeverri et al., 2019). In the South African context, Hoad (2007) noted that the derogatory term for African immigrants is *makwerekwere*. One possible etymological root for the term, Hoad (2007) contended, is that *makwerekwere* mimics the "twittering of queleas, small migratory birds that travel in large flocks and are destructive to crops" (p. 81). Queleas are

the common name for *Quelea quelea*. Nixon (2001) also offered a similar etymological explanation for the term, describing the queleas as “small but extremely destructive birds that travel in flocks of hundreds of thousands. One minute the queleas are nowhere in sight; the next they have swept through the fields like locusts, devastating the harvest” (Nixon, 2001, p. 1). Moreover, Douglas and Winkel (2014) also documented a case of eco-xenophobia where two native parrot species from Dominica were perceived by locals as one being civilized, white, and benevolent (i.e., the Sisserou, *Amazona imperialis*) and the other one (i.e., Jaco, *Amazona arausiaca*) as being a *gaté waas* (runt), negro or black, and a pest in citrus crops. Cases of eco-xenophobia occur in other states with colonial histories.

As explained by Interviewee 21, the Great-tailed Grackle “digs out the seeds or seedlings” planted by farmers in Guanacaste. Interviewee 27 saw them eating rice yields. Interviewee 28 relayed a story about the Great-tailed Grackle undoing the work of a farmer as the farmer goes about planting new crops. We suspect that in the South African, Costa Rican, and Dominican cases, perceived threats to economic and agricultural stability are attributed to the idea of the foreigner, be it human or non-human. Although we hypothesize that foreignness might itself be coded in the language of the nation-state, further research could focus on exploring that idea more thoroughly.

Ecotourism and conservation in Costa Rica have prevailed in Guanacaste’s recent history and have slowly started to replace traditional farming livelihoods (Morales Zuñiga, 2011; Vivanco, 2006). This shift is in keeping with the classification of the Great-tailed Grackle as “foreign” because this species contravenes the idealized conceptualization of Costa Rican wildlife. For the most part, Costa Ricans hold strong protective and positive emotional attitudes toward their wildlife, including their birds (Drews, 2003). In fact, Costa Ricans relate to wildlife through strong aesthetic appreciation, ethical concern, and desire to learn because their wildlife contributes to the national identity and economy (Drews, 2003; Vivanco, 2006). The Great-tailed Grackle transgresses the boundaries of charismatic, colorful, and harmless. The negative social construction of this species denigrates it to the point that it loses moral standing.

Also evident in the *Quelea* and the Great-tailed Grackle cases is the idea that the economic threat posed by the “foreign bird” might be understood as a threat to the nation itself. Thus, it speaks to why these birds are seen as coded in nationalistic or even xenophobic terms. In the Costa Rican, South African, and Dominican examples, birds that are thought to negatively affect agricultural livelihoods are not simply economic threats on the level of the individual farmer or community. We believe that instead, by threatening the labor of those individuals and communities, these birds implicitly endanger the nation itself – a nation that is a fragile, life-giving structure.

The Great-tailed Grackle, as viewed by our interviewees, does not just pose threats to livelihoods, labor, and the nation. It is also seen as threatening other bird species. People in Guanacaste are concerned because these birds also harm other species that are deemed important and valuable. We see these associations at play, once again, when one respondent makes a negative reference to the Grackle as a “hunter” (Interviewee 26, farmer). Given the region’s shift from a largely agrarian lifestyle toward a service-based economy, Costa Rica’s specific focus on ecotourism suggests another way of seeing how the negative association of the Grackle with the hunter could suggest a larger economic, national, and existential threat to both farmers and the nation (Morales Zuñiga, 2011). As the discourse around biodiversity has shifted in Costa Rica toward a more ecotourism and biodiversity-friendly position, the

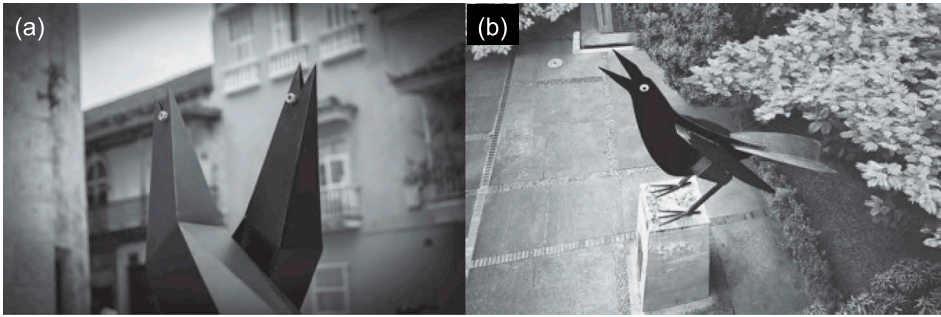
Grackle is not seen as a positive part of the ecological world, but rather takes on a negative connotation as a hunter, one that kills without making a positive contribution to the broader ecological community (Vivanco, 2006). In the farmers' narratives, it is implicit that animal behavior is interpreted through an anthropomorphic frame that adheres to ethical norms that are applied to understanding human behavior.

Like many species of the Icterid family (e.g., oropendolas, blackbirds, orioles, other grackles), Great-tailed Grackles feed on a variety of vertebrates, including tadpoles, lizards, and eggs and nestlings of other birds (Blankinship, 1996; Hansen, 1976). Despite arthropods constituting ~75% of Great-tailed Grackles' diets, the foraging behavior of pecking eggs and eating bird nestlings seemed to cause widespread dislike among our interviewees. As documented previously, people in other geographical contexts dislike birds that engage in these predatory and parasitic behaviors (e.g., cowbirds in North America; Milius, 1998). Thus, when managing species that exhibit behaviors that contravene human ethical norms, wildlife managers can develop conservation strategies and community engagement efforts, such as educational campaigns, that clearly articulate the important ecological roles played by these animals. Regarding the Great-tailed Grackle, campaigns could address their diet breadth and emphasize the fact that despite eating corn and other crops, the birds also prey upon the larvae of pest insects, ticks on cattle, and carrion, which ultimately end up benefiting farmers.

The strong anthropomorphic associations with the Great-tailed Grackle also reveal negative associations to other groups of people. Among our respondents in Guanacaste, the Great-tailed Grackle was associated with the "narcos" and labeled as "perfect delinquents" and "repugnant." Their aggressive behavior as perceived by these people is associated with crime, drug-dealing, and theft. The rampant anthropomorphic frame of the Great-tailed Grackle leads to a misinterpretation of the biological and life-history traits of this species, which ultimately leads to their overall negative social construction. Indeed, in a different study, we have documented people's perceptions toward 199 bird species in Guanacaste and found that the second most disliked species by local farmers and urbanites after the Great-tailed Grackle was the White-throated Magpie-Jay (*Calocitta formosa*), another species with aggressive behavior that also pecks on eggs (Echeverri et al., 2019). These aggressive traits of bird species seem to inform overall negative perceptions toward them, as evidenced by the quote of Interviewee 6. If we were to change the social construction of the Grackle to be more positive, we would need to start demystifying the many dimensions that contribute to its perception, starting with the deconstruction of the criminal connotation.

We stress the importance of considering local contexts when interpreting people's perceptions of animals. As we have mentioned throughout this article, the Great-tailed Grackle is negatively constructed among our respondents from Guanacaste, but this may not be the case in other parts of this species range. For example, the species is iconic in Colombia and the local name is different ("Maria Mulata"). Famous Colombian artist Enrique Grau has used this species as inspiration for many of his paintings and sculptures. In fact, five Colombian cities (Barranquilla, Cartagena de Indias, Valledupar, Medellín, Cali) have sculptures of the Great-tailed Grackle (Figure 3). In an interview, Grau stated that "the Maria Mulata is the one who accompanies us since we are born, is the one in the backyards, where the maid is sweeping, in the hallway, at the entrance, or looking through the window to see what we are doing" (Santana, 2012, p. 1). Additionally, in pre-Hispanic Mexico, Great-tailed Grackles were transported from coastal Veracruz to the Basin of





**Figure 3.** Sculptures of the Great-tailed Grackle in Colombia. The sculptures of the Maria Mulata were created by the Colombian artist Enrique Grau. Depicted in the left panel (a) are 2 male Great-tailed Grackles in the Caribbean city of Cartagena de Indias, Colombia. In the right panel (b) is a monument of a male Great-tailed Grackle (>8 m high) located at the Universidad de Antioquia, in Medellín, Colombia. Photo credit: left Juan Camilo Mora (with permission), and right Universidad de Antioquia (Flickr account, creative commons license CC BY-NC-ND 2.0).

Mexico by the Aztec emperor Auitzotl as a tribute and a source of beautiful and glossy feathers (Haemig, 2014). Thus, a comparative analysis of how this species becomes socially constructed throughout its distribution range might help inform its management in different locations. Social constructions of animals are often place-based and shift across cultures and times (Pauly, 1995). In keeping with what Dietsch, Teel, and Manfredo (2016) and others have suggested, it is imperative for conservation and wildlife management to understand local perceptions and to engage with local communities when undertaking specific actions, such as organized culls for wildlife control, relocating species to another part of their range, or when conducting ex-situ conservation.

## Conclusions

Managers and conservationists can benefit from a deeper understanding of the social construction of animals, which can indicate preoccupations and misclassifications that may contravene biodiversity management at the local level. With the case of the Great-tailed Grackle in Guanacaste, we illustrated how the complex relationship between nature, nationalism, and identity is articulated by local people and projected onto one bird. Prior research has stated that human attitudes toward animals are based on the physical appeal of the species (Stokes, 2007), the phylogenetic proximity to humans (Batt, 2009), and by cultural factors (including religion and ceremonial practices) that act as attitude modifiers when forming perceptions of non-human animals (Amiot & Bastian, 2015). We might not be able to avoid approaching animals with stories, cultural frames, misconceptions, and prejudices. Instead, we should attempt to delve into these stories and analyze public perceptions about biodiversity to fully understand human relationships with the non-human world. Thus, we support the call of scholars who stress the importance of including the humanities and the social sciences in conservation and wildlife management (Bennett et al., 2017; Chan et al., 2016).

In this article, we showed how local narratives give insight into the socio-cultural and historical contexts that ultimately determine the social constructions of animals. These narratives are important when integrating the plural and shared values on biodiversity



(Kenter, 2016). Future empirical research should evaluate how the social constructions of species vary across species' ranges and what drives any distinctions in those social constructions. Additionally, future research could evaluate the harm produced by Great-tailed Grackles to corn or other crops versus the benefits to farmers produced by grackles feeding on pest insects, as it is possible that farmers are benefiting from this species too. Moreover, research in conservation and wildlife management should strive to integrate epistemological and methodological paradigms from the natural sciences, the social sciences, and the humanities to be able to disentangle the complexities of human-animal interactions (Echeverri, Karp, Naidoo, Zhao, & Chan, 2018).

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## ORCID

Deena Dinat  <http://orcid.org/0000-0001-9249-2484>

Alejandra Echeverri  <http://orcid.org/0000-0002-8821-0509>

Mollie Chapman  <http://orcid.org/0000-0003-1399-2144>

Daniel S. Karp  <http://orcid.org/0000-0002-3832-4428>

Terre Satterfield  <http://orcid.org/0000-0001-9807-6836>

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