We navel-string bury here: Landscape history, representation and identity in the Grenada islandscape

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Introduction

"In the Caribbean, people come from everywhere, from Africa and Europe and the Mediterranean and the Middle East and the Orient....

There is a restless identity in the New World. The New World needs an identity without guilt or blame."

Derek Walcott in Bruckner (1990), "A Poem in Homage to an Unwanted Man" (NYT)

I remember as a little boy growing up in Grenada there was this rather intriguing conversation several of us kids had one time. It was a "What if?" question as kids are often distracted with when tired of playing their usual games. It began with the preposterous notion that the Kali'nago (and Kali'na) somehow returned to Grenada to (re)claim their island that was violently taken from them, thus evicting everyone and sending them back from whence they came. It was overwhelmingly voiced that "blacks" would go back to Africa, "whites" to Europe, and "Indo-Grenadians" to India, but hesitantly, "red people" or "fair-skinned" people like me, mulatto or mixed race,[6] will have nowhere to go! We were *Nowhereans*,[7] without a "motherland," without a "fatherland," without a place to call home (except Grenada), thus without a sense of place because we are of multiple worlds marooned in this islandscape, and adrift in this contested archipelago. For a boy who had grown up feeling himself othered, even foreign in the land of his birth, in the land of his parents' birth, and in the land of his grandparents' birth, it was a stark realization that my identity as a Grenadian (in the eyes of some Grenadians at least) was tenuous at best, and worse still, I had nowhere else to call

[6] The word mulato/mulatto (<Spanish: *muladi*<Arabic *muwallad*: "person of mixed ancestry, one Arab one non-Arab"), or the more widely accepted <Spanish *mulato*: "young mule," in the mistaken belief that the offspring of two different races, white and black, could not reproduce as is the case with mules) is regarded as derogatory or offensive, but widely used across the region until recently for mixed-race persons of black and white ancestry. See Forbes (1993), chapter 5 for a detailed discussion of these terms and their history.

[7] Grenadian/Caribbean term for someone with "no fixed place of abode"/"wonderer," but also of mixed race, not belonging to one, but two places/peoples (races). This view of otherness is also exemplified by the *dougla* (<Hindi *dogalaa*: "hybrid, mongrel"), the mix of Indian and black, often used derogatively; also "Coolie-Creole" (Winer 2009:311,619). This view of otherness is expressed in the song "Split Me in Two" by Cletus "Mighty Dougla" Ali. *The Best of Dougla*. MC0085. N.d. CD. The original song dates to 1961 when the "Mighty Dougla" won the Calypso Monarch competition in Trinidad. [Accessed 11 December 2022 at link].

home should this little rock suddenly become unavailable.[8] In that moment and since, I have thought of identity in different ways, and it has consumed almost every aspect of my adult life. In the end, it would be years later, many years later as I traveled the world over–from the creolized shores of my Caribbean home to my new immigrant home in the "melting pot" of North America, then to the old worlds of Africa and Europe, and even to Asia–where I was introduced to the concept and experienced landscape identity that it all came together for me, it all began to make sense, a sense of place in this creolizing island space I still call home.

1.1 A Continuously Changing Islandscape

At the height of the hurricane season in August 1498 Christopher Columbus, on his third voyage to the region, reportedly sighted the small, centuries-occupied Kali'nago-christened island of Camáhogne in the distance as he emerged from the *Bocas de Dragón*, Trinidad and rechristened it La Concepción (Devas 1974; Martin 2013). On Camáhogne lived hundreds of Kali'nago (and possibly Kali'na) scattered across a dozen or so coastal villages, continuing an unbroken yet diverse Indigenous occupation of the island that had been ongoing for at least a millennium (Hanna 2018, 2019; Martin 2013). In February 2023, the State of Grenada, celebrating its 49th anniversary as an independent nation (from the United Kingdom), recorded a population of just over 112,000 people, the overwhelming majority descendants of Africans who are today celebrating this creolized landscape as their own. In the intervening 525 years, this tiny islandscape underwent tremendous transformations through the violence of invasion and conquest, ethnic cleansing, brutal plantation slavery and colonialism, indentureship, civil unrest, (political) independence, natural hazard events, socialist revolution, and US military invasion (Brizan 1998; Martin 2013, 2022; Steele 2003). Initial European invasion altered the indigenous landscape of the few coastal villages as numerous plantations of tobacco, indigo, cotton, cocoa, coffee, sugar cane and nutmeg consumed the plains and forests, from the seashore to the mountaintops (Martin 2013, 2022). Most of these

[8] That otherness stemmed from my mixed ancestry, but specifically my connections to the village of Mt. Moritz, St. George where my father originated among the white/mixed racial population that descended from predominantly (poor) white settlers/"Redlegs" from Barbados beginning in the 1870s. I was called "Mong-Mong," the derogatory name given to people from the village despite never having lived there except as a baby. I remember arriving at the Grenada airport one time and after enquiring about a taxi a driver asked if I was going to Mt. Moritz, assuming that someone who looked like me would be going home to that village, which I was not at that time. Growing up I never liked the name because of its intent to exclude and other, but over the years I have come to embrace it as it is an important part of my Grenadian identity, with Mt. Moritz essential to my sense of place as my navel-string is buried there, according to my sister. "Mong-Mong, Proud of it!"

plantations in turn morphed into settlements, villages, and residential communities that define the Grenadian dwelling landscape today as beaches and mangroves along the coasts are overwhelmed with resorts and hotels forced to cater to an ever-growing tourism industry that threatens the sustainability of this islandscape, even as it (barely) sustains its people.

Within the over five centuries of landscape change in Grenada lie buried the stories of belonging and identity for its numerous residents as landscapes are fundamental to who we were, who we are, and who we become (Kolen et al. 2015). Within our changing landscapes lie the histories, cultures, heritage, stories, monuments, and memories that form the core of our identity, that fashion our sense of place, and that create our places of belonging (Butler and Sarlov-Herlin 2019). In inhabiting landscapes we create representations and leave *memory-traces*, inadvertently and intentionally, reflecting characteristics of who we are, sometimes unknown or even hidden to their authors and/or inheritors. Landscapes change constantly as our histories change, as our societies and cultures evolve, and as our environments are transformed. Our identities are molded by these evolving, diverse and often hidden histories, these altered environments, and constantly changing landscapes. Thus, to define or embody our identities, we must know the landscape created by our predecessors and ancestors, we need to understand the landscape and how it has been altered and in turn affected us, and we need to recognize the characteristics of our constantly changing landscape over the *longue durée*. Hence the need for an exhaustive exploration of islandscapes like this one, the one I know most intimately and confidently, the one I grew up calling home, and the one we all call Grenada.

The study of landscapes is the study of change as landscapes are the result of, at any given time, the continuous and diverse interactions between so-called "natural" environments and the people who inhabit them (Antrop 1998, 2005; Bender 2002; Kolen et al. 2015; Roymans et al. 2009; Watts 1987). To understand landscape change requires knowledge of these varied and numerous interactions between people and the environment over time, but often measured over long periods and punctuated by major events (Kolen et al. 2015). Landscape changes are driven by multiple forces, both natural and cultural, which together interact and react to produce landscapes as we observe them at any given time. Changes to the landscape usually happen over long periods and are gradual, but some can be abrupt, as in the case of natural hazard, fire, pandemic, technological change, or major historical events, which can alter a landscape in a short space of time and have far-reaching consequences (Cooper 2012; Entrikin 2011; Richardson 1997). Recognizable landscape changes provide unique

opportunities for observation and study, exposing the past in a way that can explain aspects of the present, or even the future, with these breaks with the past and the present. They can make some question their sense of belonging or connection to a place as a result of loss and/or change, while others can feel a greater sense of place by exposing hidden memories or a desire to rebuild and recreate a heritage (Butler and Sarlove-Herlin 2019; Tilley 2006). In the massive defoliation caused by the intense winds of Hurricane Ivan in 2005 Collins (2007:14) muses:

> "I looking up at Mount Gozo and I watching all the belly turn inside out. I turn round and I seeing down into Westerhall like it right next door. I watching car turn corner a mile away. I watching St. Paul's and over by Mills on the hill. I looking around and realizing I have plenty neighbours, and people not far away from each other at all, down here in what used to be Morne Delice Cocoa."

Landscape history and landscape change, embodied in the continuous processes of creolization, is at the foundation, at the beginning of understanding who we are and how we identify with a place. This is the story of how persons like me identify with this islandscape today called Grenada, rendered by the British after the original Spanish "La Granada" since the 1520s and the later French "La Grenade," and the still earlier "Camáhogne" rendered by the Kali'nago (see Martin 2013, 2022).[9]

1.2 Aims and Objectives of This Study

This study of landscape history, representation and identity on the Caribbean island of Grenada is part of the larger ERC-Synergy project *NEXUS1492: New World Encounters in a Globalizing World* that reimagines, through trans-disciplinary research, the impacts of European invasions of the Americas after 1492 in the Caribbean archipelago and on its Indigenous populations (Hofman et al. forthcoming).[10] It seeks to understand the subsequent intercultural interactions, forced and otherwise, between Indigenous peoples, Europeans, (primarily) enslaved and indentured Africans and their descendants, indentured East Indians and others in a region that today celebrates its diverse multicultural and Creole societies despite centuries of brutality, enslavement, colonialism, imperialism, cultural stripping, and environmental exploitation and degradation (Brizan 1998; Morgan et al. 2022; Watts 1987). It envisions that these new perspectives will reinvigorate discussions and debates on the place

[9] La Granada replaced earlier Spanish names La Concepción and Mayo (Devas 1975; Martin 2013, 2022).
[10] See https://www.universiteitleiden.nl/nexus1492 for more information on the project.

of Caribbean societies, Indigenous and Creole, in the history of the region, and in the globalizing world since 1492, as the region and the world celebrate this diverse, new and resilient heritage. Grenada is but one example from the New World where it all began.

The goal of this dissertation is to study landscape transformations in Grenada between 1498, the date Columbus reportedly sighted the island and regarded as its genesis into modern history, and the present by examining land use and settlement patterns of its human occupants from the Indigenous Kali'nago[11] to its current inhabitants, most of whom self-identify as Grenadians. This study will examine the last five centuries of Grenada's layered history by detailing and analyzing the drivers or major human-environment interactions that have transformed its landscape, particularly following the invasion of Europeans in the 17th century and the establishment of plantation agriculture and slavery, village settlements and subsistence agriculture, and much later tourism. Centuries of interactions between these various groups of people and the Grenadian environment have created a changing landscape that can best be described as a palimpsest where layer upon layer of interactions intertwine, overwrite and blend with each other through time. Yet leaving glimpses or blurred pictures of impacts in various and discernable ways, thus creating a long-term biography or life history of this islandscape (Jean et al. 2021; Kolen et al. 2015). The goal of this study is to understand the relationship between people and the landscape by examining the Grenadian palimpsest and analyzing landscape identity through historical representations and *memory-traces* embedded in its Creole cultural landscape (Convery et al. 2012; Satchell 2009, 2012).

Thus, the primary goal of this study is to answer the question: ***What can the life history (i.e., landscape biography) of a Small Island Developing State (SIDS) like Grenada tell us about how people convey value to the landscape through their various representations and memory-traces, and how sense of place and identities are created in this creolizing islandscape?*** To answer this question, five sub-questions have been identified that will

[11] The use of only the male register Kali'nago throughout and not the female register Kali'puna for reason of brevity, will refer to the people often designated Carib/Island Carib, specifically the primary inhabitants of the Windward and southern Leeward Islands during the historic period, but can also refer to the Kali'na (Galibis) who were part of the larger group of Indigenous inhabitants in Grenada at contact and/or colonization. The single designation may not express the cultural/ethnic diversity that existed at either contact and/or colonization, but it broadly defines the Indigenous population in the southern Lesser Antilles. "Kali'nago," rather than Carib which is the more popular designation in Grenada, is used throughout because it is a self-ascribed name for that group and has been gaining widespread acceptance as such, especially among the descendants of the Indigenous people in Dominica. The spelling adopted for both Kali'nago and Kali'na are after Boomert (2016). Hulme and Whitehead (1992), among others, however, do not support the replacement of "Carib" with "Kalinago" as they believe that the latter may not be an accurate representation of the people referred to as "Carib/Caraïbe" in the early chronicles. See also Holdren (1998) and Murphy (2018a).

inform the data analyses and generate the necessary results to discuss representations and landscape identity in Grenada (Stobbelaar and Pedroli 2011). These sub-questions are:

1) How has land use (of the Kali'nago/Kali'na, French, British, enslaved Africans, emancipated peasantry, Grenadians) changed over time based on the types of agriculture, tourism and other economic practices engaged in, and how have these altered (and been altered by) the landscape? (Chapter 5) (see Farag et al. 2005; Satchell 2012).
2) What are the primary driving forces that have altered Grenada's cultural landscape, and how have they impacted the present landscape? (Chapters 5 and 6) (see Burgi et al. 2004; Delle 2014; Etter and van Wyngaarden 2008).
3) What can land use and settlement changes over time tell us about how people represent themselves in the landscape, and/or are represented in the landscape by their diverse dwelling activities? (Chapter 6).
4) How can landscape history help us resolve issues of contested identity, belonging and sense of place? (Chapter 7 and 8).
5) How can landscape history critically evaluate issues of environmental degradation, and heritage preservation? (Chapters 6, 7 and 8) (see Marcucci 2000).

Based on the research question and sub-questions, this dissertation will take a multidisciplinary approach because of its far-reaching objectives of exploring land use, landscape biography, and landscape identity in the Grenada islandscape. It brings together extensive local knowledge and experience, and will utilize a diversity of disciplines, including landscape studies, archaeological ethnography, heritage studies, ethno-historical research, economic history, and humanistic geography to examine multiple data sets via Historical Geographic Information Systems (HGIS) mapping and spatial analysis to generate outcomes on land use/land cover over multiple historical periods (see Armstrong et al. 2007; Etter and van Wyngaarden 2008; Helmer et al. 2008). This study of land use and landscape change will produce a comprehensive biography of Grenada's historical landscape that will also inform agriculture, heritage, and the environment. These are needed as Grenada enters a new phase in its development while confronted by difficult and increasing environmental or rather societal concerns like climate change and coastal degradation, and how to achieve sustainable economic development for its ever-growing population within this seemingly bounded islandscape.

1.3 An Island Rooted in an Aquapelago[12]

Grenada is part of the Caribbean archipelago but is itself the primary island (or "mainland") of the archipelagic State of Grenada, Carriacou and Petite Martinique, scattered across some 47.3 km (30 mi) between Grenada and St. Vincent and The Grenadines, and including several islets. Grenada is also one of the many small oceanic islands in the Lesser Antilles or Eastern Caribbean, stretching from the Virgin Islands down to Grenada, with the Greater Antilles comprising the larger islands from Puerto Rico in the east to Cuba in the west (Figure 1.1).

Historically, Grenada has been politically part of the French Iles du Vent with Guadeloupe, Martinique and initially St. Christopher (presently St. Kitts), the British Ceded Islands with Dominica, St. Vincent and Tobago, and the British Windward Islands with Barbados, Dominica, St. Lucia, St. Vincent, and Tobago (with some members changing over time); the Leeward Islands comprise the English-speaking islands east of Puerto Rico and the Virgin Islands. Murphy (2021) includes it as part of "The Creole Archipelago," a grouping of islands between Guadeloupe and Grenada that shared diverse social and economic interactions in the 17th and 18th centuries despite belonging to opposing colonial entities at different times.

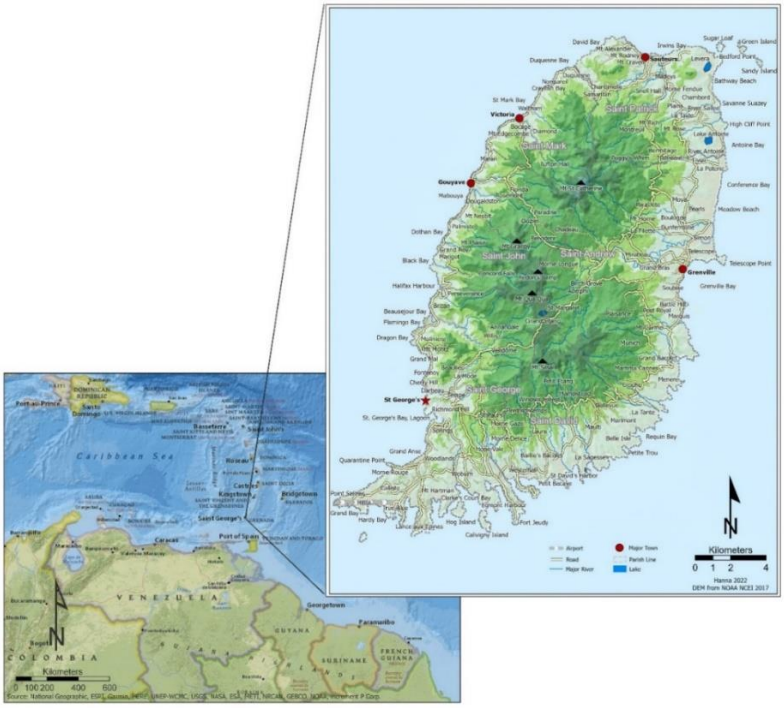

Figure 1.1 Map of the Caribbean and northern South America, with Grenada inset, 2022 (courtesy Jonathan Hanna)

[12] The term *aquapelago* was coined by Hayward (2012) to replace the more common term archipelago as "a concept that emphasizes the integration of (some) island and coastal societies with marine environments, resources, histories and imaginations" (Hayward 2022 Online).

Though these multiple associations may be of little importance today and rather confusing geographically, they hold significance within the historical French and British colonial Caribbean, particularly in analyses of Grenada's deep history. And these colonial experiences have resulted in shared identities at times, and sometimes groupings of islands readily exhibit a strong sense of connection to each other. Nonetheless, each island, due to its specific historical chronology, maintains its uniqueness and expresses a deep sense of individualism, nationalism and *islandism* that forms the basis of island identities today.[13]

Grenada's diverse chronologies have resulted in very porous borders because it was Indigenous, French, British, and a SIDS in the Caribbean, connecting it across the sub-region, archipelago, two continents, and Europe. Thus, despite this study's exhaustive examination of the Grenada islandscape, it is fully cognizant of its place and connections–political, economic, social and geographical–to multiple islands, groups of islands, the northern part of South America, Europe and North America, all of which have influenced its changing landscape at various times throughout its deep history of social, cultural and political change. This micro-analysis study, however, is meant to add to the larger discussion of *islandness* by detailing nuances and insights gained at the island/colony/country level that illustrate its uniqueness despite similarities with its island neighbors, particularly those of the English-speaking Caribbean that share a similar history of slavery and French and British colonialism. This study can then be applied on a regional scale with more realistic representations of the differences and similarities across the Caribbean region.[14]

The tri-island state of Grenada, located in the southern Caribbean, comprises the primary islands of Grenada, Carriacou and Petite Martinique, and several islets scattered along its eastern and northern coasts, and in the Grenadines. Historically, Grenada comprised Grenada and all of the islands of the Grenadines (until 1784), many of which are today part of St. Vincent and The Grenadines (Martin 2013, Martin and Hanna 2020). The State of Grenada is divided into seven administrative districts or parishes–St. George, St. John, St. Mark, St. Patrick, St. Andrew, St. David, and Carriacou and Petite Martinique (dependent islands in the Grenadines)–that date to their establishment under the French by the 1720s, and have been important in terms of geography and settlement, and thus agricultural and land-use data

[13] A case in point is Grenada and its dependencies in the Grenadines. The islands of Carriacou and Petite Martinique, despite their historical and political ties to Grenada, exhibit a Grenadine culture and identity, often with closer familial ties to the other Grenadine islands and St. Vincent rather than to mainland Grenada.

[14] See Hauser (2021) and Murphy and Hauser (2020) for similar island studies, and Murphy (2021) for a regional approach to the study of islands in the Eastern Caribbean.

collection.[15] The primary town of St. George's, in the district of St. George with its sheltered deep-water harbor and port, has been at the center of the island's modern economic, political and social development since 1649 and continues today.[16] The rural districts, especially St. Andrew and St. Patrick, dominated Grenada's historical agricultural economy, and continue to play primary roles in local food (ground provisions) and export crop (cocoa and nutmeg) production; they also play a vibrant role in the creation and practice of the island's cultural heritage, particularly in the maintenance of its folk traditions.

The island of Grenada is situated at 11°58"/12°13" North Latitude, and 61°20"/61°35" West Longitude. It is located 214 km (113 mi) north of Venezuela, 166 km (103 mi) north of Trinidad, 145 km (90 mi) north-west of Tobago, and 136 km (85 mi) southwest of St. Vincent and The Grenadines in the Caribbean Sea.[17] It measures 346 km^2 (133 mi^2), with the largest island of Grenada 312 km^2 (120 mi^2) and measuring 35 by 20 km (21 by 12 mi) at its extremes, and Carriacou 34 km^2 (13 mi^2). Grenada has a coastline of 121 km (75 mi), comprising numerous indented bays accented by white and black sandy beaches. Its proximity to northern South America has been important in its biogeography and settlement, both Indigenous (precolonial) and colonial, and its economic and cultural exchanges since; it played a significant role in the migration of peoples from South America into the Caribbean archipelago in precolonial and colonial times (Beard 1949; Giovas et al. 2012; Hanna 2018; Petitjean Roget 1981).

Politically, Grenada is an independent sovereign state that achieved independence from the United Kingdom in 1974, with a parliamentary democracy under a constitutional monarchy. It has an elected prime minister and House of Representatives (lower house), and an appointed Senate (upper house). Like many independent states in the region, it retains the British monarch, currently King Charles III, as its head of state, represented in Grenada by a governor general appointed on the advice of the prime minister. This colonial anachronism is contested, and its relevance constantly debated by Grenadians, especially in light of Barbados

[15] The original French names for the parishes were Basse-Terre, Goyave, Grand Pauvre, Sauteurs, Grand Marquis, and Megrin/Maigrin, respectively. Carriacou and Petite Martinique are dependencies as part of the Grenada Grenadines. The town of St. George's was called La Ville du Fort Royal (see Martin 2013).

[16] St. George's (in use from c1772) is derived from "St. George's Town" (c1768), itself derived from the earlier "town of St. George (parish)" (c1764). By the early 1900s the main town was exclusively referred to as St. George's. The parishes are always non-possessive unless followed by the word parish.

[17] Though Grenada has a long history with the island of Tobago, particularly when it was included under its government in the 18th and 19th centuries, Tobago is rarely mentioned as Grenada's relationship with its larger twin-republic Trinidad is overwhelming. However, more research needs to be done to understand the connections between these two quite similar islands, especially because of the migration of Grenadians (from both Grenada and Carriacou) to that island since at least the 18th century.

becoming a republic in November 2021 and the recent discussions surrounding colonial reckoning for the slave trade, slavery and colonialism and the role of the British monarchy (see Alexis 1997; Yang 2022). As with most former British colonies, it is a member of the Commonwealth of Nations (Alexis 1991). It is an integral part of the Caribbean Community (CARICOM), an integration of countries seeking to establish a single regional market and economy. It is also a member of the sub-regional Organization of Eastern Caribbean States (OECS) that brings together former British Colonies in the Lesser Antilles for economic, social and cultural integration, with all sharing the same currency and monetary authority (via the Eastern Caribbean Central Bank), judiciary (via the Eastern Caribbean Supreme Court), and educational systems (via the Caribbean Examinations Council), as well as common approaches to trade, health, environment, and other issues that jointly affect them all (see www.oecs.org).

Grenada has a population of roughly 112,579 people (2021 estimate), the majority on the main island of Grenada, with approximately 8,600 on Carriacou, and 900 on Petite Martinique.[18] Grenada has a population density of 319 per km^2, and an urban population of 34.5 percent. An overwhelming majority of the population claim full or partial African ancestry, a direct result of European colonization and the forced (and brutal) transportation of captive Africans to labor on plantations between the 17^{th} to 19^{th} centuries. There are a small number of Indo-Grenadians (whose ancestors were brought to Grenada as indentured laborers in the 19^{th} century from British India), and Europeans and North Americans, including some who have been on the island for many generations as part of the settlement landscape (Steele 2003).

The French colony of Grenada began as an agricultural slave colony, and agriculture, specifically export-oriented cash crops, has been the economic mainstay of the islands until recently when it was superseded by the foreign-dependent tourism industry and related services. Both agriculture and tourism, creating monocultural dependent economic landscapes, have had the most profound and enduring impacts on the Grenadian landscape and its people over the last five centuries (Brizan 1998; Martin 2013, 2022; Steele 2003).

[18] Grenada's last official census in 2012 recorded a total population of 109,080. The next planned census was to have taken place in 2021, but was delayed due to the Covid-19 pandemic and other issues. It is expected to be completed in 2023.

1.4 Once Upon a Time on an Island: The "Natural" Environment[19]

Grenada was formed, like the rest of the Antillean Arc, as a result of volcanic lava flows from the melting caused by the violent interactions of the various tectonic plates in the region over geologic time scale (CCA 1991). Like most of the Caribbean islands, Grenada is an oceanic island of volcanic origin and may be as old as 50 million years (or less), the remnants of a larger island, the Grenada Bank (CCA 1991; Groome 1970). The oldest known volcanic rocks on the island can be found as andesite domes in the northwest at Mt. Alexander and Mt. Rodney, St. Patrick (dating to 21 million years), and Levera Beach and Sugar Loaf Island in the northeast (dating to the end of the Miocene Period) (OAS 1988). More recent volcanic activities, 5-2.5 million years ago, formed the andesitic dome summits of Fédon's Camp and Mt. Qua Qua, and still later (2.5 million to 11,000 years ago) formed Mt. St. Catherine, the island's youngest volcanic formation, and explosion craters across the island like at Lake Antoine and Grand Étang Lake (CCA 1991). Much of this regional tectonic activity has abated, except for earthquakes like in Haiti (2010), the recent eruptions of the Soufrière Volcano in St. Vincent (1979, 2020-21), the Soufrière Hills Volcano in Montserrat (1995-2010), and the closer-to-home Kick-'em-Jenny submarine volcano that broke the surface in 1939 and has shown lesser activities since (CCA 1991; Robertson et al. 2015).

Grenada's volcanic history is readily evidenced in its rocks, soils, black sandy beaches, mountainous topography, and as many as eight explosion craters, the most prominent of which are Grand Étang Lake, Lake Antoine, and the Lagoon and Carenage, the latter a rare double caldera (Allen et al. 2017). Grenada rises to its highest point at 840 m (2,760 ft) at Mt. St. Catherine in St. Mark, one of several peaks (between 680-840 m) that are dispersed along a central north-south massif that dominates the island (Figure 1.2) (Ternan et al. 1989). These hills are dissected by numerous small rivers and large streams that carry rainwater from the mountains across the island. The topography of Grenada is very rugged, with 77 percent of the island having a slope greater than twenty degrees, and only six percent a slope under five degrees (CCA 1991). The western coast rises precipitously from the sea,

[19] "Natural" is used in quotes to qualify the term "natural environment" as these places described as natural, "pristine" or "first nature" have been impacted by humans for millennia. Though these landscapes were less transformed during Indigenous habitation they were/are in no way "pristine" and "original" as are often erroneously implied. They can best be described as "second nature," illustrating their deeply altered and changing states (see Hauser 2021; Kimber 1988). Robin (2014) goes even further, suggesting that "The island-minded idea of nature, separated from culture, has also changed. Some say we are at the 'end of nature': there is now a human signature on all the global flows: the biophysical system is also cultural, as the new epoch of the Anthropocene is imagined." See also Fernand 2022.

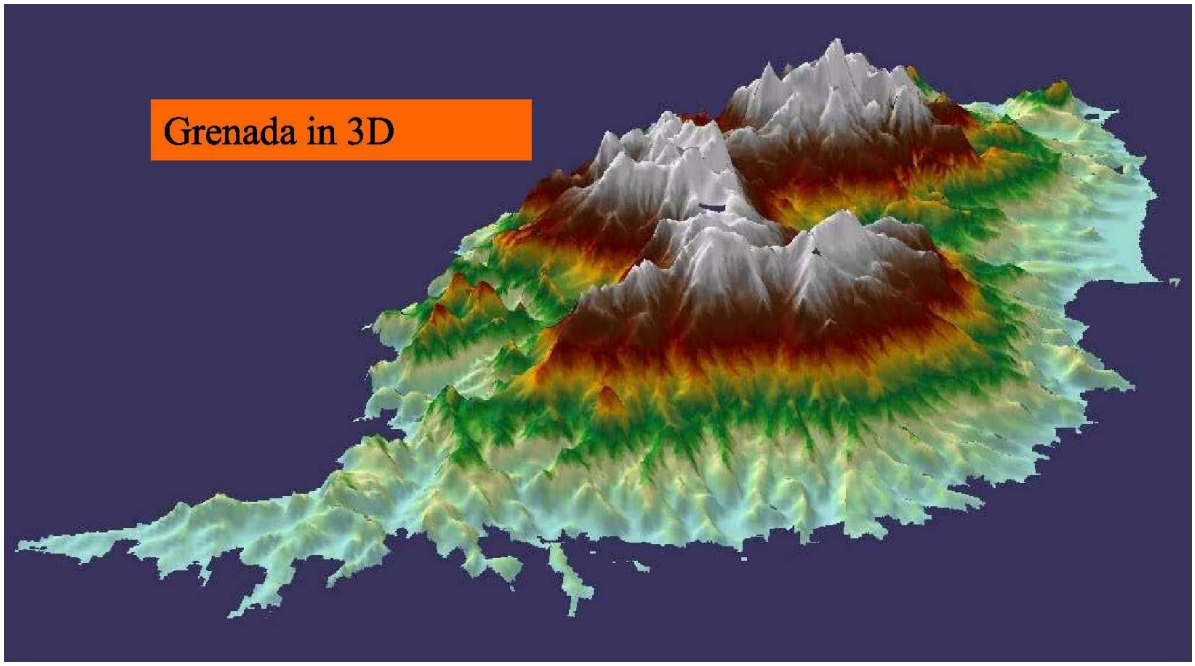

Figure 1.2 3-D Map of Grenada, showing its mountainous relief, c2019 (courtesy Ministry of Agriculture, Government of Grenada)

dominated by steep slopes. The eastern region of the island rises much less steeply, with coastal plains extending to the sea. A set of low hills dominates the northeastern and southwestern areas of the island.

Grenada's climate is defined as "humid tropical marine type," with minimal seasonal or daily variations, and constant easterly trade winds (CCA 1991). The cyclical patterns of the movements of the subtropical cyclone belt and the Intertropical Convergence Zone create a wet or rainy season from June to December, and dry season from January to May (CCA 1991). The extent of these varies across the island, with the northeast and southwest having a dry season of approximately six months and the mountainous interior of only a month. The island's topography affects the amount of annual rainfall received, with between 3,500 mm (138 in) and 1,500 mm (59 in), the highest in the interior and along its windward slopes, and the lowest in the southern lowlands. Despite the risk of tropical storms and hurricanes during the rainy season, Grenada is situated just south of the customary paths (as most tropical storms travel west and north), but has nonetheless been visited on several occasions by severe storms and hurricanes, which caused destruction and extensive damage to forests, agriculture, infrastructure, and people (McIntosh 1956; OECS 2004).[20] The temperature shows little variation and ranges between 29 and 30°C (85-95°F), but in the mountainous interior the

[20] Grenada experienced severe storms in 1731, 1768, 1817, 1831, 1832, 1877, 1921, 1963 and 1979; and hurricanes: "Great Hurricane" (1780), Hurricanes Janet (1955), Lenny (1999), Ivan (2004), and Emily (2005).

nightly temperatures can get as low as 18°C (65°F); on average one degree Celsius drop per 100 meter ascent (CCA 1991). The humid tropical climate is somewhat abated by the constant trade winds that originate in the east.

Though a small tropical island, Grenada has a diversity of plant communities, beginning at the seashore with the beach community of salt-tolerant grasses, shrubs and cacti, then moving inland through mangroves exemplified by Levera Pond, St. Patrick, then through the dry scrub of Mount Hartman, or seasonal deciduous forest of Morne Gazo in the southwest, climbing to the lower montane moist forest south of Mt. Qua Qua, and finally cloud forest at Grand Étang and Mt. St. Catherine (Beard 1949; CCA 1991; Henderson and Powell 2018; Hawthorne et al. 2004; OAS 1988) (Figure 1.3). Both its original flora and fauna are heavily influenced by its proximity to South America. Beard (1949), based on his surveys, concludes that montane rain forest or evergreen seasonal forest covered substantial areas of the island, which Weaver (1989) estimated to have been just under 50 percent. The dominant tree species, as the remaining forest exemplifies, are gommier (*Dacryodes excelsa*) and *bwa-gris* (*Licania ternatenis*). Within this ecological zone were found the island's largest animals, the mouse opossum (*Marmosa robinsoni*), large opossum (*Didelphis marsupialis insularis*), nine-banded armadillo (*Dasypus novemcinctus hoplites*), and the agouti (*Dasyprocta liporina*) that were introduced by Indigenous peoples from South America or Trinidad and Tobago (Groome 1970; Henderson and Powell 2018).[21] At the mountains' summit, stunted montane woodland or Elfin forest is dominated by *Micropolis chrysophylloides*, *goyavier* (*Myrtaceae* sp.), *Licania ternatensis* and *Euterpe globosa*, accounting for just over one percent of the land area. Palm break or hurricane forest comprises just over three percent of the land area and covers the steep slopes that experience continuous landslides due to storms. It is dominated by moss-epiphyte-climber-covered tree ferns (*Cyathea* sp.), balisier (*Heliconia bihai*) and *Euterpe globosa*.

A deciduous seasonal forest borders the coast, especially on the west, north and east. This littoral woodland was dominated by *Conocarpus erectus*, *Jacquinia barbasco*, white cedar (*Tabebuia pallida*), sea grape (*Coccolobis uvifera*), *mapou* (*Pisonia fragrans*), and manchineel (*Hippomane mancinella*) (Beard 1949; CCA 1991). Fauna like the iguana (*Iguana iguana*) and several smaller lizards (*Anolis* and *Ameiva* spp.), tortoise (*Geochelone*

[21] The agouti, not seen in decades, is believed to have been hunted to extinction, despite its reintroduction in the 1970s. The armadillo (or *tatou*), hunted and eaten, is currently listed as "threatened" as a result. The opossum (or *manicou*) is also consumed. See CCA (1991).

carbonaria), several birds, and most of Grenada's snake species inhabit(ed) this ecosystem which comprised just over 22 percent of the total land area (Henderson and Powell 2018).[22] The southeastern and the northeastern tip are covered by cactus scrub. Mangrove swamps, dominated by red (*Rhizophora mangle*), black (*Avicennia germinans*), white (*Laguncularia racemosa*) and button (*Conocarpus erectus*) mangrove trees, covered the indented bays in the

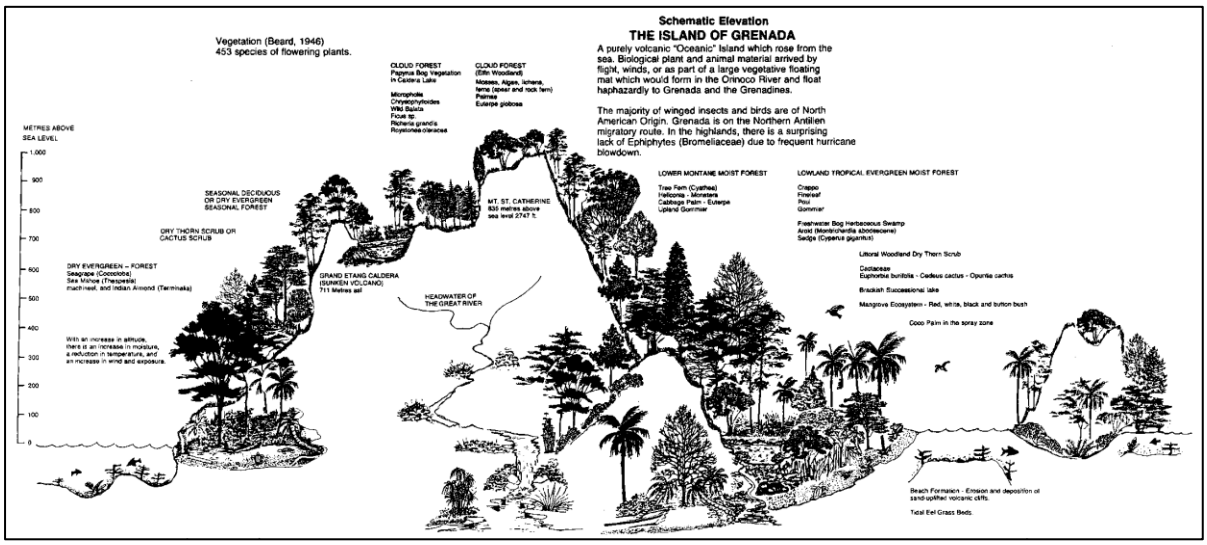

Figure 1.3 Schematic elevation of Grenada, showing its biological plant and animal distribution (based on Beard 1946)(courtesy OAS 1988)

southeast, east and the northern tip. The land crab (*Cardisoma guanhumi*) and mangrove crab (*Aratus pisonii*) are the major fauna along with numerous birds, especially migrating waterfowls. The beaches of the northeast and southeast are breeding grounds for at least three species of sea turtles–green (*Chelonia mydas*), leatherback (*Dermochelys coriacea*) and hawksbill (*Eretmochelys imbricata*). Rivers and streams team with several freshwater species like the mountain mullet (*Agonostomus monticola*), manicou crab (*Guinotia dentata*), the goby (*Sicydium plumieri*) or *titiri* (<Cariban "small fish"), and several crayfish or freshwater shrimp like the *caca-dos* (*Atya* spp), several *Macrobrachium* spp; the "big ling" or *gwarge*, "white crayfish" or *genne*, and the *lamay-longue*.

Much of this vegetation and fauna have been altered by clear cutting for agricultural uses since the beginning of human occupation, but more intensely since European colonization as agriculture has been the mainstay of Grenada's modern economy and subsistence. Beard (1949:30,63) adds that "the Grenada rain forest has been extensively disturbed" by human interference, and "Practically all but the mountain summits was cleared in St. Kitts…, and

[22] The tortoise or *morocoy* is extinct as a wild species in Grenada, but wild populations continue to thrive in the Grenada Grenadines, especially on Frigate Island (CCA 1991).

much the same took place in Grenada, where only negligible areas of Crown Lands remained." Changing settlement patterns have also affected the landscape as the island's growing population urbanize and demands more from the limited available resources (CCA 1991; OAS 1988). "Natural" hazards like storms and hurricanes have also played a part in altering the vegetation as have development, especially for the expanding tourism industry along the coasts where resorts and recreational infrastructure are constructed, particularly in the last four decades (Buckmire et al. 2022; OAS 1988; Vincent 1995). Sometimes, this construction, often presented as sustainable development and ecofriendly, indiscriminately destroys unique habitats like the mangrove estuary, salt pond and dry thorn scrub cactus woodland at La Sagesse, St. David by the Six Senses Hotels Resorts Spas project (Buckmire et al. 2022; Campbell 2020; CCA 1991).

Grenada's soils have been formed by several factors, primarily climate and topography, with rainfall being the most important among the climatic factors. First surveyed and mapped by Vernon et al. (1959), they have been classified primarily based on observed soil characteristics like color, appearance and texture (CCA 1991). Grenada's soils are dominated by clay loams (85%)–Woburn, Capital and Belmont types making up 77.8 percent–with a small percentage of clays (11.6%) and sandy loams (2.9%) (Ternan et al. 1989). Belmont clay loams dominate in the northern center of the island, and Capital clay loam in the southern center, with Woburn clay loam scattered closer to the coasts, and especially in the south and southwest. The Belmont clay loam is considered well drained and naturally fertile, while the Capital clay loam, often found on steep slopes, is acidic and known as "red mud" in Grenada because of its high iron oxide content. In general, coastal soils in Grenada, like Perseverance clay (the commonest of the clays), "tend to be stony, shallow and infertile," except for alluvials which are fertile soils depositied by rivers and streams (CCA 1991). Land capability classification assesses the suitability of land to sustainably support various crops, with Grenada's topography and soils heavily influencing tree crops, especially in the mountainous and hilly regions across the island.

The island's geology and geography, despite its small size, contribute to a diversity of climate, soils and vegetation, and its geographical features have not only shaped weather patterns and environments (including its waterscapes), but also determined the human response to them in the form of settlement patterns, its diverse agricultural systems, and the tourism industry that dominates Grenada's economy today.

1.5 Scope and Structure of the Thesis

By investigating the recent history of Grenada (since European invasion of the region), this study will take a *longue durée* approach as it analyzes its last five hundred plus years (Braudel 1949; Guildi and Armitage 2014). Its goal is to understand the processes and causes of change (not just the changes themselves or the consequences), which are sometimes incremental or so gradual that they may not be detectable if studied as events or over shorter periods. These imperceptible alterations may include nuances of demographic change, settlement patterns, agricultural practices and land ownership that can have important consequences on the landscape when examined over a long period (as by this study), as opposed to shorter periods. The analyses of quantitative data of land use and demographics (at various points) over the last five centuries will allow the unearthing of trends, possible causes, and provide more nuanced interpretations of the historical and other data.

Though there are at least two general histories of Grenada and many studies on various aspects of its changing landscape (see Chapter 2), there remains a void in several important areas that this study fills. Of note is a comprehensive analysis of the settlement pattern and status of the Indigenous population in Grenada at the time of European invasion of the region and island, particularly from original sources (see Martin 2013). This interdisciplinary study will be the first to examine landscape change via land use, especially over the course of Grenada's modern history, with the spatial results (via HGIS) contributing to the discourse on landscape representation, landscape identity, and the envisioning of a sense of place in an islandscape. But overall, this thesis endeavors to alter the narrative of how we study the life (hi)story of Caribbean peoples, especially dispossessed peoples, by using the landscape that still retains and exhibits their unique histories, memories and identities.

This dissertation has nine chapters. Chapter 2 provides more background information, including a historiography, but also a detailed historical/political account of the island between 1498 and the present. It is divided into seven historic periods or turning points that establish the basis for the analysis of land-use and land-cover data throughout the thesis (Etter and van Wyngaarden 2008). It provides the context within which this study will address land use and landscape change, and ultimately representation and landscape identity.

Chapter 3 provides the theoretical basis for this dissertation and the various challenges to understanding islandscapes, representation, creolization, identity, and contestation in the Caribbean context, with its history of invasion, genocide, violence, clash of cultures, slavery,

colonialism, and dependency in a globalizing world (since 1492). It will explore the development of landscape studies and how best to approach the history of representation and identity, and thus create a biography of a small, contained, yet complex and changing islandscape.

Chapter 4 will present the methods used in this multidisciplinary analysis to reconstruct Grenada's landscape using Historical GIS (HGIS) and spatial land-use maps within defined historic periods. It will define historical periods and driving forces and how these contribute to the analyses of the historical data.

Chapter 5 presents the outcome of the HGIS and land-cover maps per historical periods defined, and examine some of the specific driving forces affecting land-use change in each case, accounting for impacts on the landscape, and answering why and how these changes have taken place.

Chapter 6 discusses the first part of the main research question and some of the sub-questions identified above. It will discuss how different authors of the landscape were represented and/or represented themselves in the landscape through various means–toponyms, material objects, historical images, traditional knowledge, historic places and events, and contemporary imagery of representation.

Chapter 7 explores the process of creolization and its continuous (re)creation of the Grenada islandscape, attempting to define the creolized landscape and how it is constantly (re)created and (re)imagined. It will also examine the contestation of the Creole landscape and how it might affect identity formation.

Chapter 8 explores the concept of identity via a landscape approach and how Grenadians have created, are creating, recreating, contesting and/or seeking to create identities and sense of place or belonging in their changing islandscape. By using the metaphors of the "buried navel-string" and entangled rhizomic roots, it discusses landscape identity and the connectedness of disparate peoples across the Grenada storyscape.

Chapter 9 concludes with a short Epilogue that captures my journey of identity across place and time in the Grenada islandscape.