Texas Homestead Defenses, Myth or Reality? An Archaeological Cross-Cultural Comparison

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Dedication

To my husband Chris, thank you for being there for me, encouraging me, helping me, and being a rock for me through everything. To my dogs Ash, Sasha, Ghost, Butters, and Padmé, thank you for snuggling with me, making me take breaks, and just being by my side.

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Abstract

Settlers moving into new and unfamiliar lands most likely feel a level of anxiety about moving into the unknown. This thesis proposes that this is true of settlers moving into Texas. This thesis also proposes that the manifestation of that anxiety is through settlers incorporating defense on their dwellings. In order to demonstrate this through archaeology, a list of archaeological correlates has been formed through research using cross-cultural comparisons with Australia. The correlates generated fall into four categories: context, landscape, architecture, and material remains.

Table of Contents

List of Figures

List of Tables

Chapter I – Introduction

In my house I have locks on all outer doors and windows. I have a doorbell that has a built-in camera so I can see who comes to the door, or merely walks in front of my house. My house has a security system complete with an alarm loud enough to alert anyone in my neighborhood should the alarm be triggered. My car has locks and an alarm system; and my car is parked in my locked garage when I am at home. My backyard has a six-foot-tall fence around it and the gates into the backyard have locks on them. My neighbors have similar measures in place, if not more robust measures than I do on my property. These steps are taken to help defend my family, my dwelling, my property, and my possessions.

I am not aware of any immediate threats to my family, my dwelling, my property, or my possessions. However, I know that houses and cars get broken into regularly. Additionally, houses and cars that don't have their doors locked, or other measures in place, are targeted more frequently than those that have some level of defense in place. Therefore, I have these measures on my house and cars, to protect my family and my property from a perceived threat from someone outside of my dwelling.

Defending one's property from a perceived threat is not a modern cultural notion. Most people are familiar with more extreme examples like castles in Europe which were built for defense for those living within the castle hundreds of years ago. Even ancient Roman cities had defensive walls built around them to help protect the Romans living in that city. Knowing that defense against perceived threats is not a new, modern cultural invention, I began to think about settlers coming into Texas. "The common image of the settlers as a self-confident imperial vanguard, ignores the fear and insecurity that marked their experience on these colonial frontiers. They saw themselves surrounded by unknown and unpredictable dangers" (Price 2017:25). The settlers were coming into

a land that was new to them and they were coming into a land that belonged to someone else. Given that they were coming in to settle land under these circumstances I wanted to explore this further in terms of defensive set up. My thought is that settlers coming into Texas would establish their homesteads in such a way as to provide defense against perceived threats. Please note, I am not making any statements about actual threats to dwellings or property, nor am I taking sides one way or another. I am only indicating that there is a *perceived* notion of a threat from Native Americans to the settlers, and as such the settlers would have some kind of reaction in terms of defense.

What this all boils down to is that I would like to use my thesis to explore if settlers coming into Texas set up their dwellings with defensive features and how this could be determined from the archaeological record. To do this it will be necessary to look at the history of Texas, the settlers coming into Texas, what Texas had to offer to those living there, and interactions with native groups in Texas to understand the notion of the perceived threat. Additionally, there exists an analogue to Texas in Australia. Texas and Australia had settlers moving in from similar backgrounds, during similar time periods, and for similar reasons. In both instances, European settlers were moving into a land that belong to the native inhabitants and faced a perceived threat from the original inhabitants. As a result of the similarities, I intend to use Australia as a cross-cultural comparison to help establish the potential for defensive measures against perceived threats and how such defensive measures could be identified archaeologically.

Chapter II – Theories on the Problem

Most likely this topic could be analyzed using any number of different theories. This topic can be complex to look at and analyze as the factors that could drive settlers to potentially feel that they have a need for defensive measures on their dwellings is also complex. For this particular paper there are three main theories that are the primary focus; they are Cultural Ecology, Ethnic Boundary Theory and Cognitive Theory.

Cultural Ecology

The first theory being used for this thesis is Cultural Ecology. Cultural Ecology "seeks to understand how human groups utilize and create distinctive patterns of culture to adapt to a natural and social (other groups) environment" (Widmer 2019:1). There is a wide array of scientists associated with developing this theory through time. As a result, contributors to this theory come from both the ecological scientific perspectives as well as the anthropological perspectives which were combined together to ultimately create this theory.

This theory is being included because the settlers coming into Texas, or into Australia, certainly had a lot to adapt to both in the natural and social realms. They were coming into ecologies that they were most likely not familiar with and dealing with social situations that they were probably not familiar with as well. This to a certain extent ties into Ethnic Boundary Theory since that theory involves considering the resources and niches associated with the ethnic groups in order to determine their interactions (please see next section for discussion on this theory).

What settlers found when they got to Texas was a bit different than what was advertised. It certainly wasn't an easy life. The settlers had to get to Texas first which at the very minimum could be very uncomfortable and at the very worst outright deadly. Once in Texas, the settlers had to adapt to a wide range of natural conditions in Texas. The first thing they had to adapt to was the

weather and soil in the area of Texas where they were settling. Then they had to come in and learn

what crops would and wouldn't grow in their newly settled land. Some settlers were lucky and were

able to make money off of growing cotton and still others were just able to grow what would sustain

them. The settlers learned what animals would thrive in Texas, bred animals to thrive in Texas, as

well as what animals naturally occurred so that they could use them as a supplemental resource. In

addition to the ecological issues, they had other cultural issues to face. These issues ranged from the

governing body changing (Mexico, Texas, United States), wars between the various governing

bodies, encounters with Native Americans, taxes, contracts, and a whole host of other cultural

items.

Settlers to Australia faced a similar set of ecological issues as those moving into Texas. They

had dangerous journeys facing them in order to make it to Australia. Since Australia is an island the

only way to get to it is by sea which is perilous at best. In addition, facing similar obstacles as settlers

in Texas, the settlers in Australia also had to adjust to the seasons occurring at different times in the

year (which at the minimum has implications regarding crop growth), the different ecoregions in

Australia, what crops could actually grow in those regions, and especially the seemingly exotic

animals indigenous to Australia. Then the additional pressures of cultural issues are added to the

Australian settlers. Australia was at that time under the complete control of England, so there are

governmental and political issues associated with that. There are various cultural implications

associated with the fact that there were penal colonies created in Australia too. All of this on top of

the fact that they too had encounters with the Aborigines that originally inhabited Australia.

Both sets of settlers had a wide set of natural and social issues that they had to adapt to

during the settlement of Texas and the settlement of Australia. For this reason, it is important to

keep this theory in mind while looking at this problem as many of the actions taken by both sides

were driven by the need to procure the basic items to sustain life like food, shelter, and then of

course other cultural and emotional needs as well which includes a sense of security or sense of being safe.

Ethnic Boundary Theory

The next theory that will be utilized in this study will be ethnic group/ethnic boundary theory. As noted above there were a few different ethnic groups in Texas and Australia during the time frame of settlement that were coming into contact with each other. The intent is to understand interactions between the groups due to ethnic boundaries being pushed and what actions the settlers in Texas took to prepare themselves for these interactions.

Ethnic group/boundary theory in Anthropology is most notably associated with Fredrik Barth (Hummell 2014:46; Midtbøen 2016:345; Wimmer 2008:971). In Barth's perspective, boundaries between ethnic groups are continually being negotiated as ethnic groups are not just isolated into petri dish like settings where they are locked away from outside interactions and influences. Ethnic groups are continually being impacted by interactions between surrounding groups and environmental factors. Despite the fluidity of interactions, individual ethnic groups can still be distinguished from one another and therefore identified. According to Barth there are four key factors that identify and distinguish an ethnic group. The "group must be biologically self-perpetuating; share fundamental cultural values; make up a field of communication and interaction; and has a membership which identifies itself, and is identified by others as constituting a category distinguishable from other categories of the same order" (Barth 1969:10-11).

Ethnic boundaries exist both socially and territorially and drive how culture is exhibited at these boundaries. Where boundaries meet socially the cultural traits of the groups involved tend to be more exaggerated or stereotyped. This helps to ensure that the cultures stay clearly defined while interacting. This also defines how the rituals or sequence of interaction is expected to occur

based on the norms for each culture involved in the interaction. However, some groups may interact socially and develop an interdependence. When this happens "ethnic groups can make stable and symbiotic adaptations to each other" (Barth 1969:19).

Where cultures have a territorial boundary, they are typically surrounding an environmental niche in that territory. When this type of boundary meets there are four main types of outcomes or types of interactions that can be expected. First, the ethnic groups are not in competition for the resources in the niche and can complementarily exist in the same territory but have minimal interaction with each other on any facet. This means that the groups can co-exist in the same area peacefully as they rarely have encounters due to their focus on different resources in the same area.

Second, the groups are similar to the first noted above in that the groups are in the same territory, they do not fill different niches and are in competition for resources. However, the outcome is different because they have an interdependence which can involve interaction on many different levels between the groups (e.g., political, economic, etc.). The interdependence that is developed keeps the interactions out of aggressive arenas.

Another possible outcome is that the groups "may monopolize separate territories, in which case they are in competition for resources and their articulation will involve politics along the border, and possibly other sectors" (Barth 1969:19). This means that the groups don't exist in the exact same area, but they are after the same resources, and due to that competition will have interactions with each other, most likely the interactions will be in the political sphere. This doesn't mean that all the interactions will be aggressive between the groups, but with competition involved the likelihood of aggression is very plausible.

Finally, the groups occupy similar territory but are not in competition for resources. However, in this outcome, "one would expect one such group to displace the other, or an

accommodation involving an increasing complementarity and interdependence to develop" (Barth 1969:20). This is different from the other examples above where the ethnic groups are able to interact with each other in such a way as they form a symbiosis. There is no aggression and given time, there is a possibility that the groups could merge peacefully.

The reason that this is one of the theories involved in this thesis is that there are clearly different ethnic groups both in Texas and Australia interacting with each other. As discussed throughout this paper, there are both peaceful and aggressive interactions which align with nearly all of the interaction types by Barth noted above. This helps to define and understand the interactions between the groups and why the interactions are happening the way they are. For example, Native Americans and settlers in Texas are in competition for the same ecologic resources in the same niche. There are examples where an interdependence develops with peaceful coexistence and examples where politics definitely occur along the borders of the groups.

Cognitive Theory

This is final theory that is being included as it deals with the mindset of the settlers. Cognitive theory is actually a fairly broad theory and encompasses aspects ranging from linguistics to psychological aspects. The key takeaway from this vast theory is that it relates to how the culture, or the people within a culture, think which is then expressed through cultural means. Some examples could be how people within a culture think about and perceive the world; that thought process is thus expressed through linguistic choices made in conversations or writings. Another example would be how members of a culture think about and view individual illness among the members of their culture. Some cultures think those that have contracted an illness are weak or are lesser members of the culture because they contracted an illness. This thinking is then expressed through cultural interactions like the person who is ill ignoring the illness so as to not be looked

down upon, or the person has to acknowledge their illness due to its severity and then deals with the consequences of being considered a lesser member of that culture because they are ill. An additional example could even be how members of a culture perceive danger and react to that risk using cultural means.

"Texas was a dangerous, untamed country inhabited by a host of hostile Indian tribes, both sedentary and nomadic" (Nackman 1974:441). Yet another source talking about the German settlers in Texas states, "[t]he settlers in Fredericksburg were in almost constant danger of their lives" (Biesele 1927:121). Also for consideration are sources which are deemed to be reliable that can fuel settlers' feelings of anxiety. Some sources are noted further down in this paper, for example J. W. Wilbarger's book titled *Indian Depredations in Texas*; but it has also been noted that "newspapers published regularly alarmist reports about stock losses, robberies, and murders committed by the indigenous people against the settlers" (Bourke 2003:448-449). However, some of the contents of these types of stories were exaggerations or fabrications. "It goes beyond doubt that such rumors fueled settlers' anxieties about their security" (Bourke 2003:450). Since there are sources which are portrayed as reliable fueling the emotional climate, it is conceivable that the members of the cultures moving into settle a new land could have had some anxiety about the move in general, and anxiety regarding if they would be safe once they got to their destination. "Indigenous peoples were endowed with enormous power in the settler imagination" (Price 2017:32).

Adding to the situation is the fact that "[i]mmigrants to Texas faced isolation and hardship as they established their homesteads and made their living from the land" (Texas State Library and Archive Commission [TSLAC] 2016:para. 3). Due to the large parcels of land available to the settlers and overall vast amount of land available for settlement, the settlers were isolated and very often on their own in Texas. "Any kind of trade with the other far-flung Texas settlements required weeks of hazardous travel on dirt track roads" (Bullock Texas State History Museum n.d.:para. 11). This

meant that if trade with other settlers or settlements was far off, so was the prospect of help for any

dangers the settlers would face.

To help clarify fear versus anxiety, "[h]istorian Joanna Bourke distinguished between fear

and anxiety, where fear refers to an immediate, objective threat, while anxiety refers to an

anticipated, subjective threat" (Bourke 2003:216; Burke et al. 2017:158). Thus, the anxiety of

potential aggression from Native Americans is why this thesis is proposing that settlers would have

defensive measures in their dwellings to help protect them from an anticipated threat. "In this light,

features of domestic structures that may be evidence of fortification speak to an anxiety underlying

life on the frontier and the subjective nature of an anticipated attack" (Burke et al. 2017:158).

Another mental aspect that is also important to keep in mind is the act of moving into and

settling a new land. "Migration requires not only a physical movement of people across frontiers

but a mental journey in search of a hoped-for better life" (Davis and Landes 1993:10). This is very

true of people settling in Texas and Australia. They are hoping for a better life, uprooting themselves

from what they know and moving into the unknown. This act is a huge change for these settlers.

They are going to rely on the thought processes instilled in them by the culture they know to help

them adapt, and in many cases overcome, the challenges faced with this change. This also puts the

settlers in a position where they felt "exposed in an alien land and vulnerable to the superior power

and knowledge of the aborigines" (Price 2017:32).

It is important to note that feelings of anxiety can be hard to actually define and measure

for historical groups, so this is something that can be difficult for scholars to confidently address.

There are two key difficulties with this in terms of researching emotions historically. The first is that

the word anxiety is currently used to describe a certain set of feelings as discussed above, however,

in the past other words or phrases could be used that were more common to the culture and time

period in an attempt to express what is now referred to as anxiety (Bourke 2003). This means when reviewing a firsthand account from that time period the actual word anxiety is probably not used and instead some other word or phrase would most likely be used. It will be important for the researcher to have a grasp on the colloquialisms and language of that time in order to use historical documents to help identify anxiety in peoples of the past. The second issue is that topics and events in history can elicit an emotional response in modern researchers so that those researching the past may attempt to avoid emotions as attempt to report only the facts or because there may be negative emotions involved (Bourke 2003). What this means is that a subject like settlers coming in and taking land from a native people in modern society is a very charged conversation as it touches on issues with colonialism and colonization. These are issues that society and culture are still grappling with due to the negative impacts to the native peoples as a result of these colonizing actions. All of that being said, humans have emotions, and those emotions drive actions that are taken, even actions that are now viewed in a negative light, so it is important to understand the driving force behind actions being taken in the past (Bourke 2003).

Since understanding anxiety for peoples in the past is difficult for the reasons noted above, it is beneficial to look at anxiety in modern immigrants as they can provide a glimpse into the feelings or anxieties that would have been felt by settlers in the past. Settlers that are moving into a completely new cultural environment will often experience higher levels of anxiety (World Health Organization [WHO] 2018:7). To extrapolate this to Texas, settlers coming directly from Europe would have had more anxiety than a Southern Anglo settler since the Southern Anglo settlers should have basic familiarity with North America (and the associated challenges) whereas a settler coming straight from Europe would not have that level of familiarity before moving to Texas. Additionally, settlers that left their home countries due to stressful situations are more likely to have issues with anxiety (WHO 2018:7). This means that settlers that left due to religious persecutions, or other types

of persecutions, are more likely to experience higher levels of anxiety when migrating to a new place as the anxiety of previous persecution and anxiety of moving into the unknown are compounded in this situation (WHO 2018). For example, German settlers were facing religious persecution before migrating to Australia. They were already facing a level of anxiety due to issues they were facing in Germany and then add anxiety of moving into Australia has the potential to create higher levels of anxiety in that group of settlers.

It is all of these cognitive processes surrounding the anxiety of settling a new land that manifest themselves through culture that are for consideration for this thesis. If the settlers in Texas and Australia are potentially feeling anxious about being in a new land and dangers from the native peoples in that land, will they take steps to help relieve that anxiety? It is the belief of this paper that they will, and it will be through defensive measures in and surrounding their dwellings where this attempt to relieve themselves from the anxiety will manifest.

Chapter III – Justification/Significance of the Problem in an Anthropological Context

First and foremost, the goal is to understand more about people in the past and how they reacted in a particular situation. This gives the anthropological community more insight into what was going on in the past as well as gives insight into modern day practices of setting up defensive measures for our dwellings. Again, the point of this thesis is not to take sides in this topic, but to understand more about the cultural reaction to a perceived notion of a threat. Additionally, at this time there is no known protocol that exists for determining if settlers incorporated defense. The goal is to create a protocol so that going forward this is a tool that can be used to help analyze archaeological sites to determine if this was taking place. The larger implications are that this could be utilized going forward and there maybe unforeseen uses or benefits down the road for developing this protocol.

The expectation is that it is possible to determine defense from the archaeological record. If, for some reason, future research determines that is not the case, that finding will still be important to understand both anthropologically and archaeologically as it still gives insight into the settlers and how they approached settling in Texas. It also would provide additional areas to research to understand why settlers did not employ defensive measures.

Like any good academic discussion, there are people on both sides of the fence when it comes to this topic. There are those that are researching the topic that do not believe that defensive measures were taken and there are those that believe they were. As such it is important to understand both sides of this argument in order to be able to contribute meaningfully to this discussion.

The first place to start is by understanding the points made by some of those that do not think settlers set up defensive measures on their dwellings. When looking at the literature on settlers and whether or not they set up defensive structures on their dwellings, there are those that simply don't see any significance in looking into this issue. They also don't see significance in doing a comparison to see if there is any validity to the thinking that settlers did set up defensive measures on their dwellings. "Needless to say, there is little to be gained from a comparison of single-family farmsteads" (Mikesell 1960:74).

One of the first points made by those against settlers building their dwellings defensively is that "[t]his conclusion oversimplifies our understanding of the building since there were possibly several other factors that influenced the choice of construction style and materials" (Burke et al. 2017:166). The point here is that those that are looking at the dwellings to see if defense was included are seeing what they want to see in the record for the dwelling. For example, when looking at one particular stone homestead in Australia this statement was made:

> "On the balance of present data… we argue that there is no 'clear evidence' of Cambridge
> Downs having been fortified: there is only scant evidence of conflict on or near the property,
> the methods of construction are consistent with traditional principles of stonemasonry in
> vernacular contexts, the use of shutters can be explained as a purely functional, non-
> defensive choice and the window bars, if present, may well have been added at a later date
> as part of a change in use" [Burke et al. 2017:166].

They are proposing that there are many different reasons why specific choices were made during the building process, that some of the supposedly defensive structures were possibly added at a much later date, and that those choices weren't about defense.

The next point that is made regarding settlers not incorporating defense is that sometimes the further away the culture gets from points in history the more romanticized, or even mythologized, the past becomes. In this case, they are referring to the fact that settlers are often looked at as brave people going out into the wilderness, facing down the natives, and conquering the wild and unknown frontiers. "In many ways, the account of fortification that has been built around the… tales of frontier structures enhance visions of 'ordinary' people as battlers and pioneers fighting for their personal safety" (Burke et al. 2017:167). Along this same thought process is the view that looking back at a dwelling with this romanticized notion of settlers could cause modern day researchers to apply a sense of defense to a structure where none actually exists under the assumption that they must have had something on their dwellings to help them defend against threats. "[W]e would argue that stories about houses that cast them as defensible structures function similarly and may also have been invented and attached to buildings at a later date" (Burke et al. 2017:169). The takeaway from this point is that settlers setting up defenses in their dwellings have become a part of the folklore for this era and not necessarily something that factually happened.

Another critique of defense being built into settlers' dwellings is that the dwellings themselves can be hard to pin down in order to research this topic. To take this point even further, it can be hard to pinpoint exactly where potential threats from native peoples would be coming from so that it can be hard to confirm if it would even be necessary for settlers to protect themselves. "One of the problems for archaeology in terms of findings sites of frontier conflict relates to a lack of locational precision in the 'official' historical documentation, with many accounts being general expressions of the 'Aboriginal threat' in the regions" (Barker 2007:9).

One of the last points to note for those that think settlers didn't set up defensive measures, is that this topic can be very one sided.

"Stories of domestic fortification and defense are part of a long tradition of representing

Aboriginal agency as a threat. Without a critical evaluation of each structure and the

genealogy of oral historical accounts of fortification attached to them we have no way to

separate the 'weight of fear and the imaginary' on the frontier in the past from the ways in

which such claims have been used subsequently to remember or forget the consequences of

the frontier in the present" [Burke et al. 2017:170].

That is to say that it can be very easy to look at this only from the settlers' perspective and not

consider all of the ramifications of this way of thinking or of how settlers impacted the natives in the

land they settled. They are also advocating for making sure that the sources of such stories of

defense and depredations on frontiers are critically reviewed for veracity and not automatically

taken as fact.

Pros

Interestingly, there are mentions of defensive measures being taken by settlers in Texas. For

example, when reading about German settlers it was noted that "[o]n the site of the present

Catholic church a palisade or stockade was built, its north side on the edge of the forty-foot bluff on

the south bank of Comal Creek" (Biesele 1927:120). In this particular example not only was a

defensive structure built, but where it was built was defensive as well since it had a bluff to help

keep it secure. There is another instance found referenced regarding the German settlement where

"[o]n a hill rising about thirty feet above the flat on which New Braunfels was built, and just

southwest of the present freight office of the Missouri Pacific Railroad, a large blockhouse was built"

(Biesele 1927:120). While these are both general defenses for a town, it hints at defense being an

important consideration not only in the building, but where it is located. It also indicates that

thought is being put into defense. The question that remains is if this forethought of defense extends down to the individual dwelling level or not.

"In an archaeological and architectural context, some studies have argued that settler anxiety was manifested in features that fortified domestic dwellings and outbuildings against Aboriginal attack" (Burke et al. 2017:158). This particular example is referring to dwellings in Australia. To extend this point further, this paper argues that settlers that come from similar areas in Europe during roughly the same period of time as those moving to Texas and Australia would have similar anxieties regarding the native people in those lands. Those anxieties would cause settlers in Texas to also fortify their domestic dwellings. "These structures represent physical manifestations of settler fear" (Grguric 2009:59).

Additionally, one of the biggest arguments to counter some of the points made by those stating settlers did not incorporate defense is context. Context is very significant when reviewing the evidence for this topic. The dwelling features and additional archaeological evidence being considered for fortification must be kept in context as well as the historical information related to the settlers involved must be kept in context. There is a paper by Grguric (2009:69-72) that notes the dwellings being constructed by settlers in Australia were of typical British design without rear windows or doors, but they did contain embrasures in the rear of the dwelling facing sheds or paddock; these embrasures do not appear in the British dwellings typically constructed in Britain. Someone that is against settlers including defense might argue that these embrasures are merely there for ventilation. However, the key regarding the embrasures is noting where they are located and what can be viewed through these embrasures.

"Being primarily domestic structures, it is easily appreciated why the settlers preferred to keep conventional windows in the front and sometimes side walls, rather than have small

embrasures as the only source of light and air. Their intention was not to turn their

dwellings into dark forts, but rather to have the added ability for the occupants to keep an

eye on the rear of their dwellings and, in the event of an attack, have a firing position from

which the defender would be practically invulnerable to Aboriginal weapons" [Grguric

2009:73].

In this sense it is important to keep the archaeological context of what is going on in mind. The

settlers are taking the dwelling design they are familiar with and modifying it in such a way that

defense can be achieved.

This thesis is currently in support of settlers incorporating defense into their dwellings in

Texas. The goal of this thesis will be to take additional examples like the one noted above and

analyze them to understand the defensive measures being taken by settlers, how the defensive

measures can be identified in the archaeological record and use that to develop the methodology

for determining if defense is incorporated by settlers in Texas.

What Would a Depredation Look Like?

"To Anglos, so many unrestrained Indian tribes… posed a psychological threat illuminated by

the very real prospect of actual raids" (Cashion 2003:para. 6). In order to understand what defenses

settlers might need to put in place on their dwellings, it is important to understand what a

depredation event might look like. The day would probably start out like a normal day. The settlers

get up, start working on chores that need to be done like checking on and feeding their animals or

maybe even doing some work on crops that have been planted to ensure that the plants will

continue to grow. It gets to be midday, so they take a small break to have a meal to keep them going

through the work ahead of them for the rest of the afternoon. While sitting down for this meal they

hear sounds of panicked animals coming from their herd. The family goes to see what the

commotion is only to see a group of Native Americans trying to collect animals from the family's

herd. The family is spotted, and the Native Americans start coming after the family too. The family

now hears weapons fired in their direction. The males use their weapons to fire back at the Native

Americans while ushering the family back to the safety of their dwelling. The females and children

seek shelter within their dwelling while the males attempt to defend their family, dwelling, and

livelihood from being plundered. The settlers are able to wound a couple of the Native Americans.

The Native Americans collect their wounded, some of the animals they were able to round up prior

to being discovered by the family and depart, leaving the settler family rattled and afraid.

The above is a scenario fabricated by the thesis author after reading accounts of what

depredations with Native Americans looked like from sources like a journal article discussing what

pioneer land surveyors in Texas faced while surveying land (Daniell 1957), Mary Ann Friend's

Journal (2021) which describes interactions with Aboriginals in Australia, and accounts of

depredations in Texas from the book by J. W. Wilbarger (1985). This fabrication is very, very tame

compared to some of the other accounts actually described in the sources noted above. However,

this gives an idea of what a depredation interaction would look like in one of the scenarios with a

better outcome. The settler family had weapons and shelter to help defend and secure themselves

from harm and they made it through the interaction alive. The settlers in Texas and Australia were

aware of the depredations occurring either through written accounts or word of mouth and as a

result would need ways to keep their families and livelihood safe from these potential threats. This

is what drives this thesis, building the protocol to understand what would be left behind from the

scenario above, other worse scenarios, or defenses in place in preparation for such scenarios.

Chapter IV – Objectives

The objective of this thesis is to review the literature available regarding settlers in Australia and in Texas to determine if settlers were taking defensive measures against perceived threats. If settlers are experiencing anxiety from the potential for depredations in unsettled areas of Texas, then it is expected that there will be material remains, architectural features, and landscape features to provide defense that will assuage the settlers' anxiety which can be located through archaeological methodology. The settlers were migrating from the known to the unknown, most often into rural areas so that they were on their own with little to no help or assistance available to the settlers. In order to demonstrate this archaeologically this thesis will develop a protocol for being able to look at a site in Texas to determine if settlers were taking defensive measures against perceived threats from Native Americans. It is anticipated that this will include determining if location was such that settlers would have an elevated perceived threat. For example, a settler that moves into the middle of a large city will not have the same level of a perceived threat as someone that settles in a rural area. The location chosen for settlement also needs to be reviewed to determine if there is a strategic value in settling in that location. Next, it will be key to determine if there are key indicators that would indicate a defensive set up. These could be things like architectural remnants or inclusive of specific types of artifacts left behind. Finally, there may be other indicators, which are unknown at this time, which would be indicative of defense.

Chapter V – Background of the Problem

Throughout Texas's history people that have settled in Texas come from a variety of places. This is true even in modern day Texas. However, of concern for this thesis will be people entering Texas prior to the Civil War. There is a whole other set of cultural tensions involved in the Civil War which presents a different dynamic than looking at the people that initially settled Texas and the Native Americans that were originally in Texas. Additionally, it adds a whole different range of conflicts to Texas that do not feel appropriate to include in this thesis since this the goal is understanding a reaction to a perceived threat from Native Americans.

Part of the issue faced with determining exactly who was coming into Texas and when they arrived is the fact that the demography can be difficult to determine, as the census data from before the Civil War depends on the country that controlled Texas at the time of the census, and if the data does exist, it didn't ask the specific questions needed to get at the information regarding the origins of the settlers (Jordan 1969; Nackman 1974). However, there are other historical documents to review that can help paint the picture about who was coming to settle Texas. This work will refrain from doing a full history on Texas as that would turn into its own thesis. Instead, a more generalized look at who was in control and which peoples were moving in will be discussed as it pertains to the European groups coming to settle Texas.

A Brief History of Texas

Texas has been under the control of several different governments throughout its history. This is important to this thesis as the different governments contributed to the settlement of Texas. The governments did this by welcoming, or not welcoming, settlers for various political reasons. Therefore, it is important to have at least a very brief notion of who had control of Texas in order to understand which settlers were ultimately being attracted to Texas.

Prior to Europeans coming to the New World there were tribes of Native Americans that either lived in Texas or migrated through Texas. The history of the inhabitants of Texas prior to contact is extremely fascinating and complex since Texas is a link between North America and Mesoamerica. However, the impact on settlers thinking they would have to defend themselves from Native Americans really comes from the contact with the tribes that were in Texas when the settlers arrived. Please see the section of this paper titled Native Americans for a discussion of tribes actually in Texas while it was being settled.

The first known Europeans to come to Texas were the Spanish. They arrived in the first half of the 16th century. At first it was a series of Spanish explorers that came through Texas seeking resources and knowledge of that area of the New World for Spain (Fehrenbach 1968; Garrison 1903). Spain quickly moved on from merely exploring Texas; they began the process of conquering and colonizing Texas. This period of conquering and colonization takes place in later half of the 16th century and spans into the early 18th century (Wooster et al. 2020). It is during this time that the Spanish establish their missions in Texas, use their encomienda system in Texas, and they engaged in conflicts with the Native Americans already inhabiting Texas (Fehrenbach 1968; Garrison 1903).

For a small period of time the French had a foothold in Texas in the Matagorda Bay area by setting up a colony there. The colony only lasted for a short period of time from 1685 to 1688. The colony had issues ranging from people deserting the colony to disease to Native Americans attacking the colony (Weddle 2011). The colony ultimately failed, and France lost any real chance at holding land in Texas.

The Spanish maintained a hold in Texas up until the Mexican revolution when Mexico broke free from Spain to become its own country in 1821. Texas was included in this break from Spain and was considered part of Mexico. Mexico's control of Texas would not last as Texas fought for and

gained its independence from Mexico in 1836. Texas was now its own Republic. Mexico did not

recognize this new republic and still considered Texas part of Mexico.

Texas was ultimately annexed and became part of the United States of America in 1845.

Mexico still tried to lay claim to Texas which resulted in the Mexican-American War that ended in

1848 with Mexico relinquishing all claims on Texas. Texas's history gets more complicated from here

on out as there are issues of slavery and how to address that issue now that Texas is part of the

Union. Additionally, the Texas-Indian Wars take place as a result of settlers encroaching on lands

owned by Native Americans. All of this leads to the Civil War, where yet again Texas is under a new

government, the Confederacy, before being brought back into the Union at the conclusion of the

Civil War.

Why Are Settlers Coming to Texas?

There are many reasons why settlers came to Texas. The first aspect is the information

provided in various forms of propaganda about how wonderful it is to live in Texas. This is of course

being used to spark interest in Texas and advertise why people should settle in Texas. The second

aspect is really what was in Texas that makes it suitable for settling and developing. This is what the

settlers actually found occurring naturally in Texas and the natural resources that could potentially

lead to conflicts between native groups and the settlers. Finally, there are other aspects that drive

the movement of people into Texas. For example, settlers coming to Texas looking to escape legal

troubles.

Propaganda. "A key device often employed was the "America letter," an exaggerated, highly

favorable description of the new homeland designed to encourage friends and relatives to follow"

(Jordan 1986:410). In addition to the letter, there was a wide variety of the types of written

materials that were used to attract people. They included pamphlets, newspapers, books written by

people touring through the various colonies, and any other written source that seemed like it would reach people and persuade them to come to Texas. "Those interested in relocating… believed in and desired written materials" (Rozek 2003:119). These written materials were important as it provided a source of information regarding what people coming to Texas could expect to find once they got here. Since it was in written form it was considered more trustworthy than other sources.

The various documents that advertised Texas often did so with promises of what Texas was like and what those coming to Texas would find. Texas, of course, was always portrayed in a favorable light indicating how much better life was in Texas. In these documents it noted that Texas was "so fertile, of such benign climate, so rich in metals and natural resources that when descriptions of it by geographers were read, instantly one came to believe that they were talking of Paradise" (Benson 1987:225; Davis and Landes 1993:10). Clearly these types of documents were a very targeted advertisement campaign seeking to promote Texas and encourage people to come to Texas.

The information that was being provided about Texas seemed to center mostly on land, agriculture, and livestock. This is understandable because they were often all tied together as reasons for people coming to Texas. It was promises of large enough parcels of land in Texas that would give a settler enough land to practice agriculture or raise livestock (or a combination of both) for economic gains that always seemed to be the emphasis of the information being disseminated about Texas. In a publication by De Cordova about immigrating to Texas he states:

> "…parties may rest assured that, while the lands are of good quality, embracing wood, water and other desiderata, the titles will be beyond dispute, and the terms such as to suit the circumstances of most individuals seeking new homes" (1858:20).

This information being provided about Texas is clearly playing on the fact that people coming to Texas would be able to own their own land, without any disputes over the land, and their own homes. This is something that might not have been able to happen for these settlers prior to coming to Texas. It also indicates that basic necessities like water, wood (presumably to build the home, other necessary structures, or for fuel), as well as other basic resources abounded on the land that was being offered to settlers. Additionally, this indicates that they would have ready access to these resources, which again, may have been something that they may not have had, or that they were depending upon others to get access to these basic resources.

A wide array of agricultural items was advertised as flourishing in Texas. The crops that were advertised included sugar, cotton, wheat, rye, oats, corn, and tobacco. In many cases it was emphasized how much better things like cotton or sugar grew in Texas versus other areas in North America by indicating a longer growing season in Texas than in other places, or just simply that the crop did better in the soils in Texas than in other areas. "So great is the fertility of our soil, that we can produce, year after year, upon the same land, the same crops, without the aid of any manure (De Cordova 1858:22).

The livestock, like cattle and horses, which are synonymous with Texas were brought over into the New World. "There were no cattle or horses in the western hemisphere, but the continents supplied no enemies that the hardy importations from the Spanish Peninsula could not, unaided by man, readily overcome" (Dobie 1939:171). So, once the animals got to Texas they flourished. This became part of the attraction for people coming to Texas. They could own land as well as own livestock as it was advertised as a booming resource in Texas. De Cordova writes to immigrants telling them that "a cow can be raised in Texas at less cost than a chicken in any other place in the United States" (1858:20). Examples like this paint a picture that owning and raising livestock in Texas is essentially better than doing it in any other place in the New World. This is certainly quite an

advertisement for livestock in Texas! There were other types of livestock being raised such as sheep, goats, and chicken, however, the horse and cattle are often the ones that were advertised the most to people looking to come to Texas.

There of course were other cultural aspects that were being advertised to entice people to Texas. One such example was how much better education is in Texas than in other areas in the United States (De Cordova 1858). This is not the only item related to children that was mentioned. There were reports about how well children thrived and how low the mortality rate was for children in Texas compared to the rest of the United States (De Cordova 1858). Also, at various times the different governments in Texas would give tax breaks to settlers. So much so, that depending on the government currently in control of Texas, settlers wouldn't have to pay taxes for at least the first four years they lived in Texas (Davis and Landes 1993)!

While the above examples of the propaganda provided encouraging people to come to Texas is not exhaustive, it does at least paint the picture of some of the reasons being used to get settlers to come to Texas. Also, because it was propaganda, there is little, if any, talk about negative aspects in Texas (i.e., very hot and humid summers). Moreover, there is no discussion about how settling Texas impacts the Native American population in Texas, nor any discussion of the Native American population's reaction to the settling of Texas.

The Ecology of Texas. "A number of factors combined to funnel Southern expansion toward Texas: the inhospitable table marshes of southwestern Louisiana and the rugged highlands of western Arkansas were not attractive to settlers, and the fertile prairies of Oklahoma and Kansas lay beyond the Indian frontier" (Jordan 1969:88). These combined with other ecological considerations helped to bring settlers into Texas.

One of the major aspects to talk about regarding the ecology of Texas is the climate in Texas as this affects agriculture, livestock, the general well-being of the settlers, and many other facets of life in Texas. The climate truly varies from one end of Texas to the other. Even the temperatures and rainfall vary greatly in the different parts of Texas. "The annual rainfall can range from eight inches in the deserts of far west Texas to 56 inches per year in the swamps of east Texas" (Texas Parks and Wildlife Department [TPWD] n.d.:para. 2).

Important to note, in figure 5.2 below the average temperature for Texas for the year 2020 is displayed and there is a corresponding map of Australia with temperatures for 2020 in figure 5.7. This year was selected in order to be able to compare data from the same time frame against each other as temperature records from when Texas and Australia were both being settled are spotty, and in some cases nonexistent. The time frames being discussed for this thesis were pre-industrial and according to NASA, "the average global temperature on Earth has increased by at least 1.1° Celsius (1.9° Fahrenheit) since 1880. The majority of the warming has occurred since 1975, at a rate of roughly 0.15 to 0.20°C per decade" (NASA Earth Observatory n.d.). So, there is documentation of the temperature increasing, but the maps should still give a general idea of temperature ranges across Texas and across Australia.

Figure 5.1
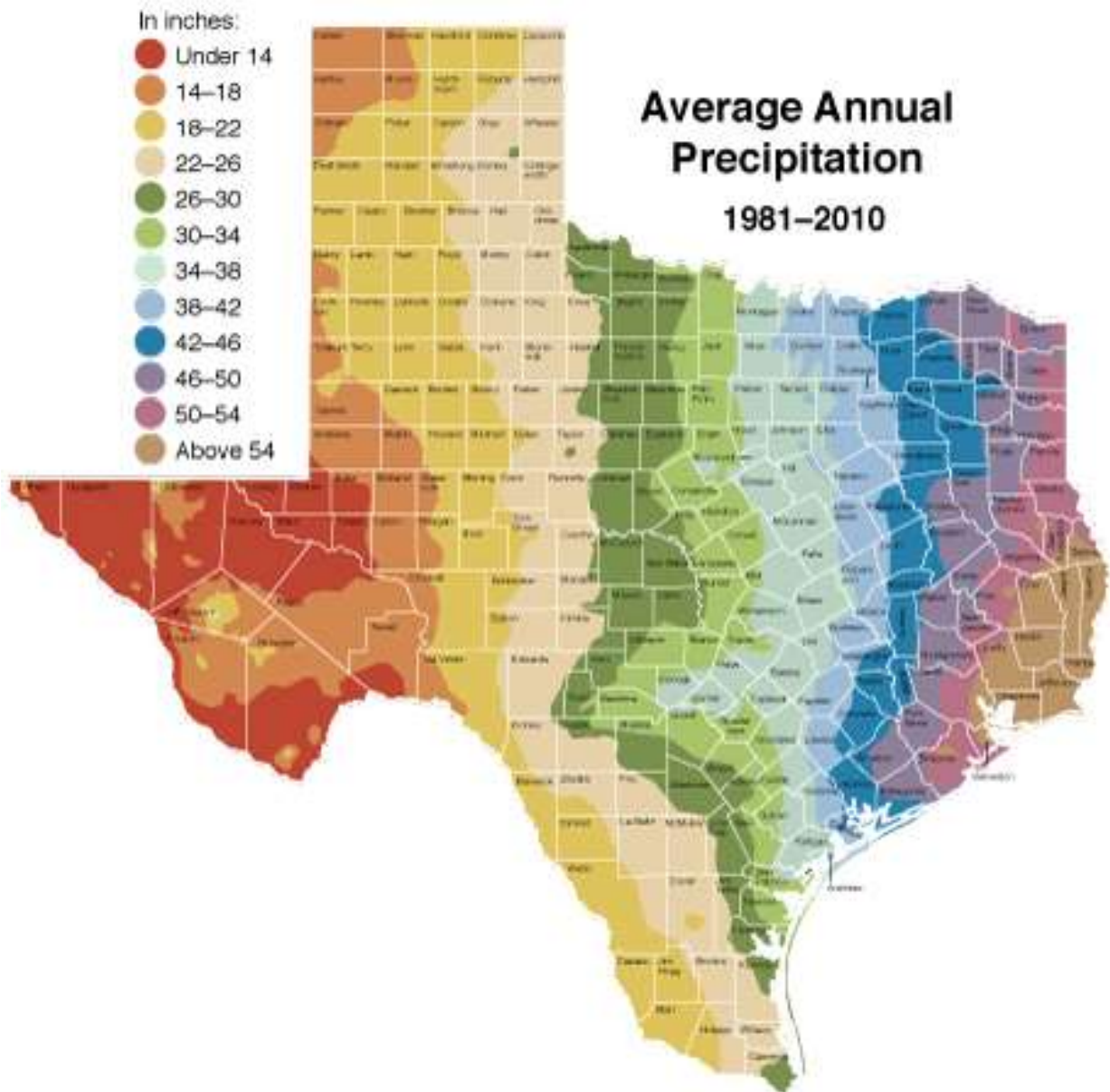
Note. This map shows the annual rainfall in Texas from 1981 to 2010 to give an overall idea of the amount of rain that Texas might receive each year (Texas Almanac 2013).

Figure 5.2

Temperature (F)
1/1/2020 − 12/31/2020

Generated 1/20/2021 at HPRCC using provisional data.   NOAA Regional Climate Centers
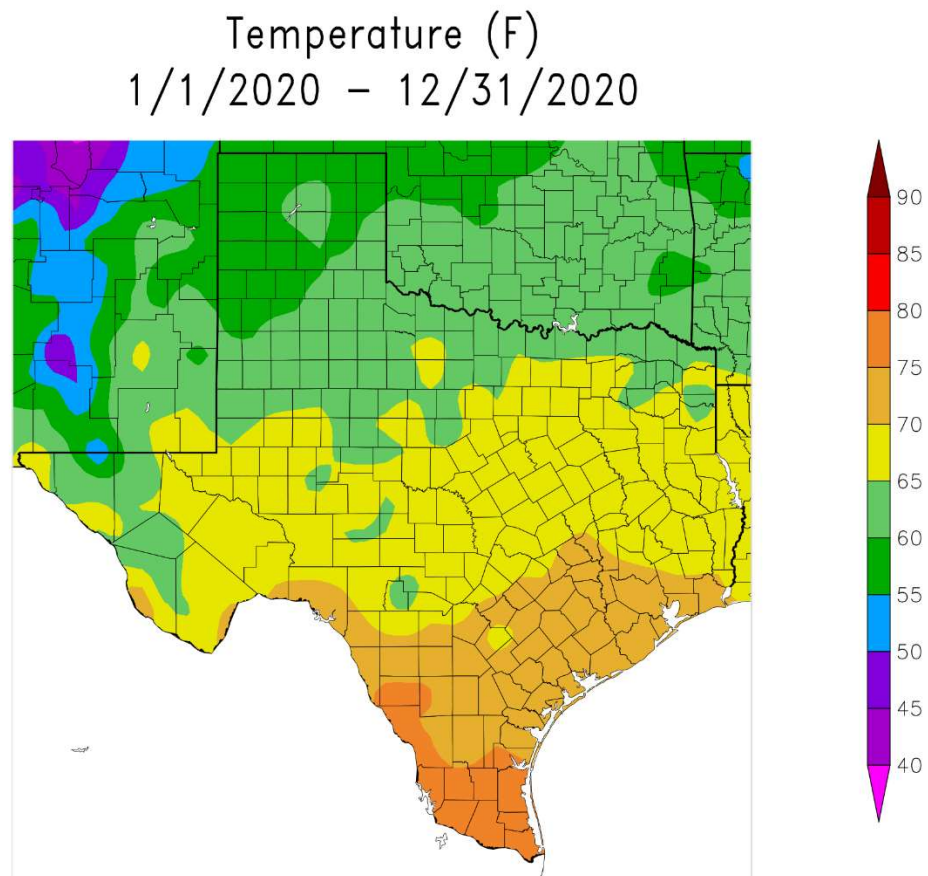
Note. This map shows the average temperature in Texas for the year 2020 (High Plains Regional Climate Center 2021).

Going hand in hand with the wide variation of climates in Texas is the fact that the land itself varies greatly across the state. There are mountains, marshes, prairies, forests, deserts, tropical areas, and nearly everything in-between all within one state. As a result, "[g]enerally, Texas is divided into 10 natural regions or ecoregions: the Piney Woods, the Gulf Prairies and marshes, the Post Oak Savanah, the Blackland Prairies, the Cross Timbers, the South Texas Plains, the Edwards Plateau, the Rolling Plains, the High Plains, and the Trans-Pecos" (TPWD n.d.:para. 3).

Figure 5.3
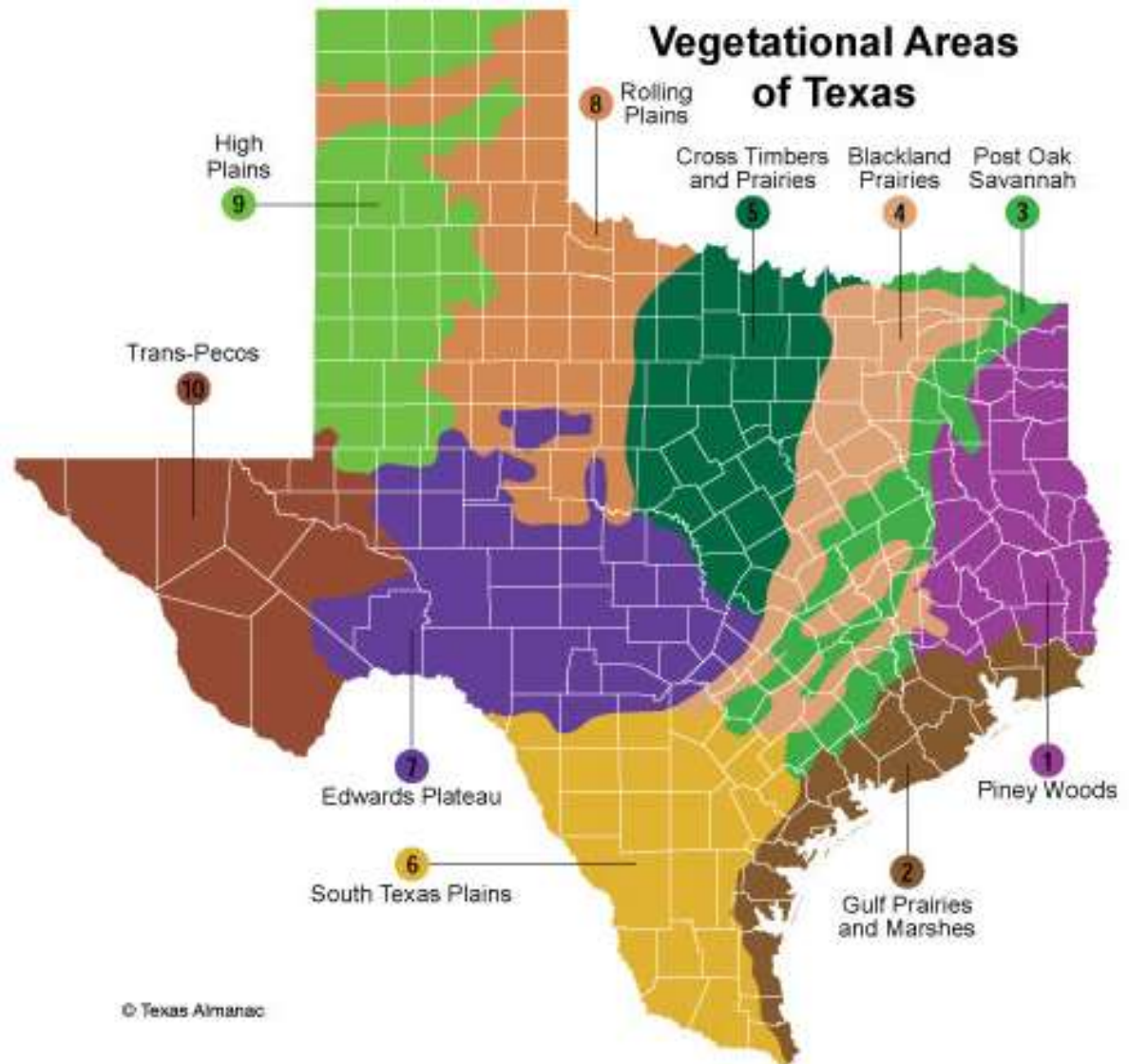
Note. This map shows the difference ecoregions within Texas (Texas Almanac n.d.).

These different ecoregions directly impact what settlers can grow and produce in those areas as the soils, indigenous flora, and temperatures all vary in each of those regions. Combined with that, the climate in Texas can vary greatly across the state. The wide range of weather in Texas and the different ecoregions in Texas clearly impact what is grown and where it is grown so that the promises made to settlers regarding growing seasons may not hold true depending on where the settler actually wound up in Texas.

The settlers had to learn how to work the land in Texas for agricultural purposes. "These Eastern and European-bred settlers brought with them the farming and stock-raising techniques of subtropical and humid continental areas. They applied these techniques to the new land in Texas, but the land proved unwilling to cooperate" (Fugate 1961:155). The settlers had to learn to work all the different types of land and soil in Texas in addition to navigating all the different types of weather in Texas. This is a great challenge for the settlers to overcome since a technique that works in one ecological area of Texas most likely would not work in another very different ecological area in Texas.

However, not all promises made to entice people to Texas were untrue or even half true. There are a variety of crops that grow successfully in Texas. In fact, prior to Europeans arriving in Texas, "advanced agriculture existed among the Caddo Indians… and [they] depended for food primarily on the cultivation of corn, beans, and squash" (Dethloff and Nall 2017:para. 2). Settlers were successfully able to grow corn, which was often used for animal feed as well as for feeding humans. They also grew sorghum, sugarcane, fruits, tobacco, and a smaller proportion of other crops like herbs that were typically for personal consumption. Additionally, grapes were found naturally in Texas and were grown to be consumed as well as turned into wine.

Out of the crops advertised as being successfully grown in Texas, cotton was the one that really took off in Texas. "Cotton production rose massively from 58,000 bales in 1850 to over 431,000 bales in 1860" (Dethloff and Nall 2017:para. 6). With the success of cotton in Texas, the plantation system also took off. While this was clearly good for the plantation owners, as we know, there was the issue of slave labor force behind the plantations. These plantations owners often were not average settlers coming in escaping economic troubles, they were people that were typically already wealthy coming in and setting up plantations. "Only one in every four families in antebellum Texas owned slaves, but these slaveholders, especially the planters who held twenty or

30

more slaves, generally constituted the state's wealthiest class" (Campbell 2021:para. 12). So, this means that an average settler coming in might have some success growing cotton in Texas, but the bulk of the cotton production was coming from people already wealthy that came to Texas with the specific aims of making money off of growing cotton. It should be noted that this is the same case for sugar being grown in Texas. Slave labor was utilized, but like cotton, it was a smaller percentage of settlers with wealth at their disposal that were growing and producing sugar in Texas (Campbell 2021).

Cattle is very closely associated with Texas. This is because cattle became big business in Texas. Like cotton, in the period of time leading up to the Civil War, the cattle industry took off in Texas (Dethloff and Nall 2017). There is documentation of cattle being brought over by Spanish Missionaries to Texas; through various circumstances these cattle wind up being wild and roaming Texas (Fugate 1961). If the settlers could manage to capture these cattle on their land, they now had this great resource at their disposal. There is also documentation of settlers bringing in cattle as well. They may have brought only a few with them, but they were still bringing them into Texas (Jordan 1969). Regardless of how the cattle got to Texas, once they were in Texas and being actively raised, the cattle industry took off.

As noted above, settlers that focused on cattle and cattle ranching really worked to make this resource take off in Texas. As a result, cattle drives coming in and out of Texas become common place and notorious. The cattle were utilized for food, their hides, and a number of other products like tallow that can be obtained from them. They are also beasts of burden that could be used for plowing and other such needs which helps the settlers address their agricultural needs and outputs. The bounty of products and uses that could be gained from cattle is why these animals were such big business. This resource is perhaps an advertisement regarding Texas that wasn't misleading! There are several other animals, like chicken or goats, that settlers could work to raise in Texas on

their land. In fact, there was an effort to breed mohair goats in Texas to make them more suitable to

the Texas environment and more productive in terms of mohair (Barnett 1987).

The idea of horses also being closely tied to Texas comes from horses being essential for

"cowboys" and cattle drives. Horses were reintroduced to the New World by the Spanish. They are

in a similar situation to the cattle where they were eventually running around freely on Texas land

as well as some settlers would bring horses with them if they could afford it. Additionally, the

settlers coming into Texas may not have had any experience riding or raising horses prior to arriving,

but if they were interested in the cattle business at all they had to learn to ride a horse (Fugate

1961). Horses were essential in cattle drives. The horse can also be used as a beast of burden as well

as a means of transportation outside of any uses associated with cattle. While it isn't as common in

our culture today, horses were also used for meat. The variety of uses for horses made them a

valuable resource. This one wasn't advertised as much as cattle, but it certainly played a large role in

the lives of people coming to Texas.

The coastline of Texas also provides a resource in terms of fish, seafood, and other aquatic

life that can be obtained as a food source. "Turtles, too, became objects of local commerce during

slack agricultural times, as even farmers joined in catching them" (Doughty 1984:46). There of

course are a number of rivers and lakes that can provide a source of fish or other aquatic life as well.

These aquatic resources would be beneficial to use to supplement diets in general as well as in times

when crops failed.

Other Factors Driving Migration to Texas. People coming into Texas may not have owned

the land they previously lived on, or if they did own the land, it was not as large of a parcel as what

settlers coming into Texas could own. Once in Texas settlers could often obtain a league (4,428

acres) and a labor of farming land (177 acres) that they now owned and could pass down to their children (Davis and Landes 1993:11; Nackman 1974:447).

Another aspect of coming for a better life is escaping one where the settler might be considered a criminal. Settlers were fleeing to Texas for a wide variety of legal issues (Davis and Landes 1993). One of the more common issues was related to debt (Davis and Landes 1993; Nackman 1974). Throughout the course of the United States there have been economic issues where the economy was in turmoil, or at the least severely depressed, which had a big financial impact on the citizens in the United States. "[A] fair number of the migrants to Texas were victims of economic disaster, having left their former homes in the aftermath of the Panics of 1819 and 1837" (Nackman 1974:444). These settlers came to Texas in order to start over and begin anew financially. "Texas held the added allure… of being a separate sovereignty without extradition treaties where those in financial trouble - or any other kind - could flee for refuge" (Nackman 1974:450).

Knowing that settlers were coming to Texas as a result of legal issues, the government of Texas in 1841 took up the notion of allowing other countries the ability to come after debts in Texas, however, they realized if they did that the lands would be sold off and Texas lands would then be under foreign control (Nackman 1974:453-454). As such, various laws were enacted so that residents in Texas could not be imprisoned for debt, nor could households or land be seized under default of debts (Nackman 1974:454). This reinforced the ability of settlers to be able to come to Texas due to debts without fear of additional legal actions.

There were also other issues such as land prices, often linked to the economic turmoil referenced above, governmental issues including taxation, and personal issues which prompted people to come to Texas. "Outside the jurisdiction of the United States until 1846, Texas served as a sanctuary for all who had something to run away from" (Nackman 1974:444).

Which Settlers Are Coming to Texas?

"Immigration directly from Europe played an important role in the peopling of Texas" (Jordan, 1986:408). This means that the majority of settlers coming to Texas were from Europe. For the time frame being considered within this proposal the literature reviewed thus far makes no mention of significant numbers of people coming to Texas from other areas of the world; it was primarily Europeans that were discussed in the literature reviewed. "Texas differs from most other slave states in that it acquired a large European-born population in the nineteenth century" (Jordan 1969:97). As such, by 1850 "the population of Texas was ethnically mixed, with such diverse groups as southern Anglo-Americans, Mexican-Americans, Germans, and Britons in the mosaic" (Jordan 1969:85).

Spanish. The first Europeans in the area that would become Texas were the Spanish. In 1519, there was an expedition to map the coastline from Florida to Mexico led by Alonzo Álvarez de Pineda; this is the first known European contact with Texas and the first known European map of any portion of Texas (Whitehurst n.d.:para. 2). The next major exploration through Texas occurred in 1528. Álvar Nuñez Cabeza de Vaca and three other men were shipwrecked in Texas and spent roughly eight years making their way through Texas as they tried to reach Mexico City (Joseph and Chipman 2021:para. 9). This accidental exploration allowed Cabeza de Vaca to describe Texas and its native inhabitants in great detail. The result of Cabeza de Vaca's written account from his time in Texas was additional fuel for Spanish exploration of Texas. The exploration of Texas ultimately leads to the establishment of Spanish Missions in Texas. "[I]n 1690, a group of Franciscans established the first missions in East Texas. It was the beginning of a wave of Spanish missions and colonies" (Whitehurst n.d.:para. 11).

It is during this period of Spanish colonial expansion that some of the more well-known

Texas settlements like San Antonio, were established (Joseph and Chipman 2021:para. 45).

Additionally, during this expansion, the Spanish had issues with the Native American people in Texas

as well with other European countries, such as France, encroaching on their territory in Texas. After

the Louisiana Purchase, Spain encouraged additional Spanish settlement in Texas in order for Texas

to act as a buffer from the United States (Joseph and Chipman 2021:para. 78).

The most complete census data found thus far for the Spanish colonial era in Texas comes

from the 1804 census and demonstrates a total population of 3,605 (Joseph and Chipman

2021:para. 79). Importantly the census does "not include "uncivilized" American Indians or Black

slaves. In the case of the latter… there was virtually no Black slavery in Texas on the eve of Mexican

independence" (Joseph and Chipman 2021:para. 79). After Mexico broke away from Spain the

number of Spanish settlers coming directly to Texas was severely reduced.

United Kingdom and the Irish. "A sizable number of immigrants were from the United

Kingdom, including at that time the whole of Ireland" (Jordan 1969:99). However, most literature

tends to focus on the Irish that were settling Texas and less on people from other areas in the

United Kingdom. That being said, it is important to note that "[n]atives of the United Kingdom

formed the largest single population group in three Texas counties in 1850, though their total

numbers reached only about 2900" (Jordan 1969:99).

Mexico wanted a buffer between America and themselves. This caused the Mexican

government to specifically seek Irish settlers to migrate to Texas. As a result, Irish settlers came to

Texas from 1829 to 1834 due to the efforts of the Mexican government actively seeking settlers to

come in to help provide a buffer against America (Davis and Landes 1993; Jordan 1969; Jordan

1986). One reason for this is that most Irish were Catholic, much like many of the Mexicans. Since

they shared the same religion, many Mexicans believed that meant that the Irish shared many of the same morals. As an added bonus, the Irish were not fond of England or America so that the Mexican government hoped this would keep the Irish loyal to Mexico should the need to defend Texas arise (Davis and Landes 1993).

Germans. "The first groups to follow the Irish, and eventually to account for fully half the European immigration, were the Germans" (Jordan 1986:409). Large groups of Germans were actively sought to establish settlements in Texas. As a result, by 1850 there were about 11,500 Germans in Texas (Jordan 1969:97). They were sought more for economic reasons unlike the Irish for the reasons as noted above.

> "The "Adelsverein," a society composed of German noblemen who were interested in overseas colonization for both economic and philanthropic reasons, brought more than 7000 Germans to Texas between 1844 and 1847; a similar endeavor… at about the same time, resulted in the immigration of an additional 2000 German- speaking settlers" [Jordan 1969:97].

This is generally the pattern that most European groups followed when settling in Texas. There was usually a charismatic leader that triggered the movement of people through various forms of propaganda (Jordan 1986:410).

Other European Settlers. There of course were additional European groups that settled in Texas. "Texas houses the southernmost Scandinavian rural settlements in the United States" (Jordan 1986:412). In the 1840's Norwegians, Swedes, and Danes settled in Texas. However, these groups of settlers tended to be smaller in number when compared to the Irish and Germans. For example, there were only about 100 Norwegians that came to Texas during this time (Jordan 1969:98). In the 1850's Czechs, Silesian Poles, and Wends (Sorbs) came to Texas; this makes Texas particularly

unique as no other Wendish settlements are known to exist in the Americas (Jordan 1986:412). "The Wends (also known as Sorbs or Lusatian Serbs) are a Slavic people concentrated in East Germany near Bautzen and Cottbus in the upper Spree River valley, an area long known as Lusatia" (Grider 2016:para.1).

Southern Anglos. The next largest group, apart from the Germans, is the group that has been classified as the Southern Anglos. This group was comprised of people that initially settled in the southern states of the United States but moved on to Texas; or they were the offspring of those that initially settled in the southern states but moved on to Texas. "By 1830 southern Anglo-Americans dominated Texas numerically, this dominance was further strengthened by large-scale immigration between 1834 and 1850" (Jordan 1969:88). One estimate puts the number of Southern Anglos at over one hundred thousand arriving in Texas between the years 1821 and 1846 (Nackman 1974:441). Another estimate states that they made up at least 54% of the population of Texas by 1850 (Jordan 1969:85).

"In general, the farther west the state, the more likely it was to contribute migrants directly to Texas" (Jordan 1969:92). The reasons noted above were what drove those already in America to come to Texas and in such large numbers. Additionally, the people coming from these states shared the makeup of those that originally settled in those states.

"Though basically British-derived, the host group was itself far from internally homogeneous. Southern Anglos numbered not just English, Scotch-Irish, and Welsh among their ancestors, but also Pennsylvania Germans, Hudson Valley Dutch, French Huguenots, Delaware Valley Finns and Swedes, and others" (Jordan 1986:386).

As such, this group has a primarily European origin, or at the very least, European ancestry.

Enslaved Migrants. It would be remiss to not note that both Texas and Australia did have an

enslaved population at some point in their histories. However, as mentioned above, census records

are not great at getting at the necessary data during this time regarding where the slaves came from

in addition to the actual population size in Texas. Furthermore, the slave population in Texas

generally came from a different group of people than the slaves in Australia.

"To Anglo-American slave owners slavery was a practical necessity in Texas – the only way

to grow cotton profitably on its vast areas of fertile land" (Campbell 2021:para. 2). However, slaves

were not common when Texas was first established and under Spanish control. Their numbers grew

as the government of Texas changed and as wealthy plantation owners needed additional labor

forces for their crops. Slaves were utilized not only for cotton, but for sugar as well as for the

production of food crops to maintain the plantation. "By the end of 1845, when Texas joined the

United States, the state was home to at least 30,000 enslaved people" (Campbell 2021:para. 8).

Slaves came to Texas along with Southern-Anglos moving to Texas and they also came through the

Atlantic Slave Trade. With the port of New Orleans not too far away from Texas in Louisiana, and

with ports like Galveston located within Texas, plantation owners had relatively easy access to

acquiring additional slaves for their labor force. Despite joining the United States, slavery continued

to grow in Texas so much so that "[t]he census of 1860 enumerated 182,566 slaves" (Campbell

2021:para. 9).

Native Americans

It can be tough to reconcile the viewpoints on Native Americans throughout the history of

Texas. To settlers they were friend or foe depending on which tribe the settlers encountered. Either

way, settlers were coming in and taking lands that didn't belong to them. "The government grants

virtually ignored any possessory rights of the Indian tribes, who justified their claims on the basis of

prior occupancy" (Nackman 1974:447). In some cases, the settlers were able to, at least for a time,

establish a peaceful relationship with some of the Native Americans. There were other tribes, however, that did not work with the settlers and there were conflicts between the two groups. It is these tensions that developed between the two groups that help to drive this thesis as it is the goal to understand whether or not those tensions drove settlers to have defensive measures set up on their dwellings.

Native Americans in Texas. There have been several Native American tribes that have inhabited Texas through the course of history. Which tribes and where they were located in Texas has fluctuated over time. The pressures of the expanding United States and the change of governing bodies in Texas have impacted which tribes were in Texas, where they were located in Texas, the relationship amongst the various tribes, and the relationships of the tribes with the settlers coming to Texas.

Figure 5.4 below shows in the span of almost three hundred years the change of locations and tribes in Texas. Tribes that were north of Texas were pushed down into Texas by the expanding United States. For example, in the figure the Comanches are not shown to be in Texas in 1500, however, by 1776 they were forced into Texas and had taken over a substantial portion of Texas. Tribes and their locations within Texas have fluctuated through time as more settlers moved into Texas.

The Native American tribe that is frequently mentioned in literature as being fierce and being the tribe feared by settlers in Texas is the Comanche tribe. "The Comanches, exceptional horsemen who dominated the Southern Plains, played a prominent role in Texas frontier history throughout much of the eighteenth and nineteenth centuries" (Lipscomb 2020:para. 1). Once the Comanche tribe arrived in Texas, they have been described as conducting numerous raids,

abduction of settlers, and various other acts that gave them a reputation which could very easily

add to the anxiety that settlers would feel about moving into Texas.

Figure 5.4

ETHNOLINGUISTIC DISTRIBUTION OF NATIVE TEXAS INDIANS
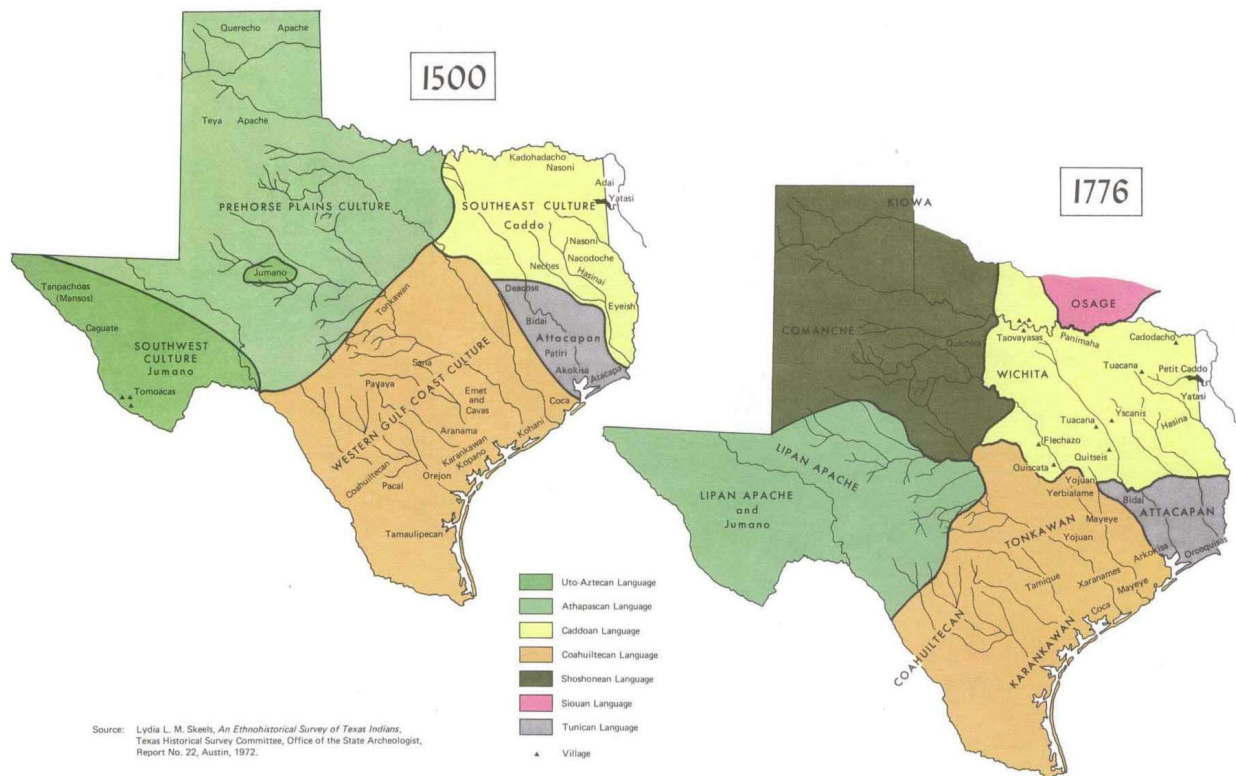
Note. These maps show the change in location of Native American groups in Texas (Skeels 1972).

There are documented instances where the settlers coming to Texas were able to negotiate

treaties, or some other form of peaceful arrangements with the Native Americans in Texas. This

allowed them to cohabit in areas of Texas together with few issues. One example of such an

arrangement occurred while Sam Houston was President of Texas. Houston worked to establish

peace between the settlers and the Native Americans. There were a series of treaties enacted from

1841 to 1845 with the Caddos, Delawares, Chickasaws, Wacos, Tawakonis, Kichais, Anadarkos, Hainais, Biloxis, Cherokees, and eventually the Comanches (TSLAC 2017b). These ended hostilities between the groups, for a time, as well as established boundaries between the Native American Tribes and the settlers.

Another example occurred in 1847 when a peace treaty between the Comanches and the Germans was enacted which effectively ended any hostilities between the groups near New Braunfels and Fredericksburg (Biesele 1927:125-126). This particular treaty allowed both groups to come and go as needed without harm coming to them, they would work together if there were attacks from those outside of the treaty, gifts would be given to the Comanches for their cooperation with the treaty, and both groups would uphold these points within the boundaries noted in the treaty (Biesele 1927:125).

There were numerous attempts to establish treaties and working relationships between the settlers and the various tribes. However, without fail, one side or the other would break the treaty which led to conflicts arising again between the two groups essentially putting both groups back at square one in terms of their relationship.

When Texas became a part of the United States in 1845, the government of the United States was now responsible for how affairs were handled with the Native Americans in Texas. "In an attempt to protect both settlers and Indians, two reservations were established in Texas in 1854… The establishment of reservations did not stop Indian raids" (Lipscomb 2020:para. 13-14). This step seemed to increase hostilities between both groups. The settlers were still experiencing issues with Native Americans that were not resolved with the creation of the reservations. The Native Americans were either now frustrated with their confinement on a reservation; or they were not

one of the groups residing on the reservation, and therefore they were frustrated with the

continued push of settlers into their territories.

Depredations. Depredations, or at least the stories of depredations, are what is believed

would cause settlers to use defensive measures. "In the nineteenth century, the term

"depredations" was universally used to describe massacres, conflicts, and cruelty inflicted by Indians

upon whites" (TSLAC 2017a). As a result, it will be necessary to look at some of these instances of

conflict to understand how they contributed to settlers potentially thinking that they needed

defensive measures in order to protect themselves from these depredations.

J. W. Wilbarger's (1985) book, *Indian Depredations in Texas*, covers over 200 instances of

depredations from Native Americans, including the depredation involving his own brother. These

interactions included kidnappings, scalpings, stealing of various kinds of livestock, plundering

houses, stealing crops, actual battles between groups, and a whole variety of other negative

interactions between these groups. A few of the stories contained within the book do not reference

when the depredation reportedly took place; however, the rest of the depredations are noted as

occurring between 1821 and 1889 (Wilbarger 1985). Wilbarger (1985) notes that the stories

collected are from what he considers to be trustworthy sources over the course of twenty years and

that he knows personally about many of the stories recounted in the book. This book took oral

stories, in addition to some written down stories, regarding interactions with Native Americans and

settlers and collected them into one volume. This means that based on this book alone, there were

over 200 known stories of interactions between Native Americans and settlers where the Native

Americans are shown to be a murderous and massacring people viciously attacking settlers. The

veracity of these stories is not in question for this thesis; however, the fact that there were that

many stories is the point for consideration in terms of the mental impact on settlers.

Another documented instance occurred when Lipan Native Americans demanded gifts from the Irish settlers when they first arrived in Texas (Davis and Landes 1993). The settlers refused to give gifts and the settlers were concerned about their possible return (Davis and Landes 1993). While this instance is not one where there was physical harm done, it was such an interaction that it did cause concern amongst the settlers in terms of possible negative repercussions from not providing gifts to the Native Americans.

As noted above, the Germans had a large migration of settlers into Texas, and some were even able to establish a working relationship with Native Americans so long as they stayed within the bounds of the treaty. However, before the treaty:

"The German settlers of New Braunfels were not to be long without a sample of Indian savagery. In October, 1845, two Germans, Captain Friedrich v. Wrede and Lieutenant Oscar Claren, were killed and scalped as they were returning to New Braunfels from Austin" [Biesele 1927:120].

In addition to the incident above, there were times where the settlers were working around their dwellings and were shot at with arrows (Biesele 1927:121).

As a result of the number of Germans moving into Texas they pushed and even surpassed the boundaries noted in the treaty. The depredations escalated as time went on and as the Germans pushed further and further west in Texas (Biesele 1927:127). German settlers enacted additional treaties with the Comanches, however, these treaties did not resolve the escalating issues. There are documented instances of settlers being murdered with scalps being removed, oxen or other livestock being killed, and livestock including horses being stolen on the Llano (Biesele 1927:127). It is not clear if the Comanches were involved in these escalating tensions or if it was the acts of other Native American groups. For example, it is noted that "[s]mall bands of Lipans and Wacoes made the

country unsafe" (Biesele 1927:128). So, while it could have been the Comanches, it just as likely could have been another tribe as well.

This is just a sampling of the stories and accounts of negative interactions between Native Americans and Settlers in Texas. The point is not to locate and recount every interaction like this, but to understand that these accounts did exist and could have an impact on settlers in Texas regarding perceived threats to their families, property, dwellings, and livelihoods from Native Americans.

Australian Analogue

For some it may be odd to think that there could be an analogue between Australia and Texas, but these two places do share some striking similarities. Texas and Australia were settled by similar groups of Europeans, "both [places] are largely covered by plains and desert… both find support through their natural resources…[b]oth economies are also heavily dependent on agriculture, dating back to their earliest colonial years and continuing to this day" (No. 4 St. James 2014:para. 2).

Australia did not go through the hands of as many different formal governments as Texas did in its history. However, the European governments that were involved in the settling of Australia had a direct impact on which settlers arrived in Australia and how Australia was settled. Similarly to Texas, Australia had an indigenous population that was not contacted by Europeans for quite some time. Australia was then "discovered" and went through a period of European colonization, as well as a period of conflicts with Aborigines while being settled. In order to understand more about Australia, an extremely brief history is noted below.

A Brief History of Australia. Prior to Europeans coming to Australia, there existed native inhabitants that made their way to Australia and existed there for thousands of years. The history of

how the native inhabitants arrived in Australia prior to European contact is interesting and complex since Australia is an island. However, the impact on settlers thinking they would have to defend themselves from Aborigines really comes from contact with the Aborigines when the settlers arrived. For further discussion of the Aborigines in Australia, see the section below titled Aborigines.

The Dutch were the first known group of Europeans to discover Australia and map its northern coast in the 1600's (Australian Government Department of Foreign Affairs and Trade [DAFT] n.d.; The Metropolitan Museum of Art [The Met] 2003). The Dutch did not pay much attention to Australia after that as they saw more benefits in focusing exploration and colonization on other areas north of Australia (One World – Nations Online n.d.). So, even though Australia had been discovered, the Dutch left it relatively untouched.

It isn't until the latter half of the 18th century that Australia gets attention again from Europe. This time it is from Britain. In 1770 "Captain James Cook charts the east coast… claims it as a British possession and names eastern Australia New South Wales" (BBC News 2020). After the United States became independent, Great Britain turned its attention to Australia. The first penal colony was established in 1788 (Anderson 2002; BBC News 2020; DAFT n.d.; The Met 2003).

After this time Australia moves into a period of frontier settling and colonization. It is also during this time that colonies are established which would ultimately make up states in Australia. In the 1850's Australia experiences a gold rush which encourages an influx of settlers (BBC News 2020). Australia continues to see the population increase while the Aboriginal population decreases over the course of the last half of the century. In 1901, the colonies unify into states that make up The Commonwealth of Australia (BBC News 2002). At this point colonization has essentially ended and Australia is moving on from that phase in its history. Additionally, the world, including Australia, is moving closer to World War I which starts a whole different set of conflicts and issues.

Why Are Settlers Coming to Australia?

Some of the similarities between Texas and Australia start appearing when viewing what was driving people to settle in Australia. The first aspect is probably one of the most well-known about Australia. Some of the first people to settle Australia were convicts. The next aspect to consider is the ecology of Australia. Finally, there are other aspects that moved people into Australia. This can be things like propaganda similar to what was seen for Texas, but there were other issues too that caused people to want to settle in Australia.

Convicts. The fact that convicts were some of the first people to settle in Australia is fairly well known. "In all, about 160,000 convicts were shipped to the Australian colonies" (Nicholas and Shergold 2002:16). This reason for settlers in Australia is similar to people facing legal troubles fleeing to Texas. While the settlers fleeing to Texas may not have been convicted of the crimes, hence the reason they were fleeing, the point is they still had some issue with broken laws which caused them to settle in a new land.

The reasons for transporting convicts to Australia are complex. However, there were a couple of key contributing factors that started this process of sending this population to Australia. "[T]he rapidly growing prison population was housed on ship hulks anchored in rivers and along the sheltered coastline of southern England. The hulks quickly became disease-ridden, with one third of the prisoners dying while on board" (National Museum Australia 2020:para. 9). Since overcrowding was posing a major problem, one of the solutions found to address it was sending these prisoners away from Britain to alleviate the overpopulation. After the United States won their independence from Britain, the United States would no longer accept convicts from Britain; this means that Britain had to look for somewhere else to send their convicts.

The solution to Britain being able to send their convicts somewhere after the United States was no longer an option appeared when Australia was discovered. The convicts were transported to Australia because they could provide labor that was needed to help establish the colonies in Australia while serving their sentences. "Convicts provided the labour that built the young colony's roads, bridges and public buildings" (National Museum Australia 2020:para. 19). The convicts would either work for the free settlers on their property, or for the colonial government. Then by maintaining good behavior these convicts could also work towards their freedom. Once they were freed either by good behavior or by serving out their sentence, they had the option of staying in Australia to carve out a life for themselves.

It should be noted that there is discussion in the academic community regarding if convicts are functionally equivalent to enslaved African population in the United States. The convicts in Australia were a source of forced labor as part of their sentence for their crimes. However, "[t]o call the Australian convict a slave muddies the water of their legal standing – that is, that they were never commoditized by the system that forced them to labour" (Jeppesen 2019:548). This is to say that they were not bought or traded in the same way as slaves in Texas or other areas of the US. The convicts fell under the purview of the government enforcing their sentences rather than individual owners. Additionally, convicts had "rights that slaves did not have – such as the right to fair judicial process, and rights to government mandated basic living standards including food, clothing, shelter and rights to their children. This does not mean, of course, that life for Australian convicts was not harsh, or that at times they were not subjected to excessive punishment, or that government mandates were not sometimes ignored" (Jeppesen 2019:548). All this is to say that there are some similarities between the two populations and that both populations provided a very important source of labor in their respective locations; but the convicts in Australia had the benefit of having

some legal rights/protections as well as the possibility that their forced labor would end once their sentence concluded.

The Ecology of Australia. Australia and Europe have some geographic similarities. As a result, it is believed that Captain Cook named New South Wales in part as a tribute to King George III, but also because the coast reminded him of the coast of Wales (Brown 2019; The National Museum of Australia 2021). However, Australia generally has a different climate than Europe. One of the more obvious differences is the fact that Australia is located in the southern hemisphere. This means that settlers from Europe already had to deal with the seasons being opposite from when they typically occur in the northern hemisphere. Even though there is a hemispherical difference, Australia winds up being surprisingly like Texas due to the varying rainfalls across the continent and the different ecoregions as well.

As most would expect more rainfall occurs around the coast of Australia with significantly less rainfall further inland. This leaves significant internal areas of Australia with little to no rainfall, and often experiencing drought. An interesting effect of rainfall pattern is that it "can lead to parts of the continent being in drought, but inundated by waters from rainfall thousands of kilometres away" (Australian Government - Geoscience Australia n.d.:para. 6).

Figure 5.5
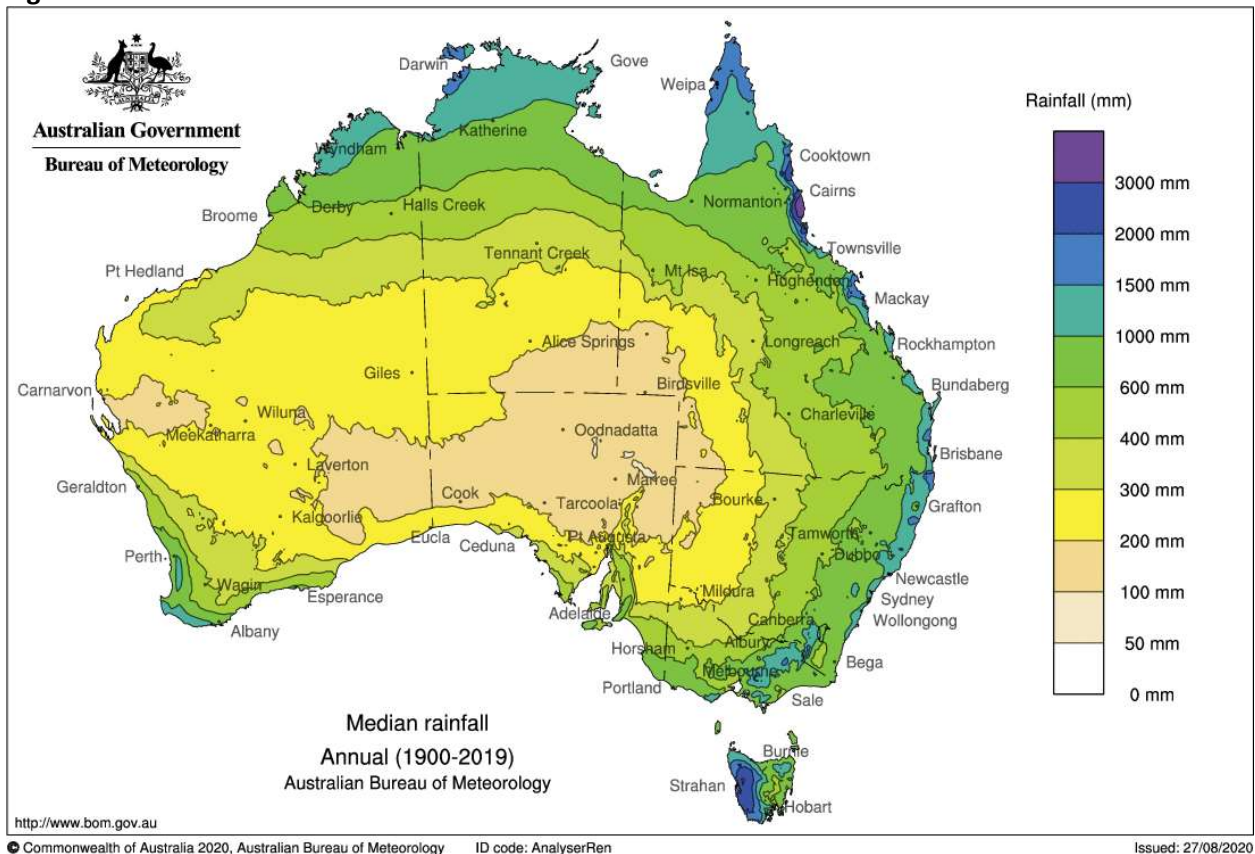
Note. This map shows the annual rainfall in Australia from 1900 to 2019 to give an overall idea of the amount of rain that Australia might receive each year (Australian Government Bureau of Meteorology 2020).

This variation in rainfall and Australia's location causes it to have a variety of ecoregions. There are

eight main ecoregions identified in Australia: tropical and subtropical moist broadleaf forests;

temperate broadleaf and mixed forests; tropical and subtropical grassland, savannas and

shrublands; temperate grasslands, savannas and shrublands; montane [high elevation] grasslands

and shrublands; Mediterranean forests, woodlands and shrubs; deserts and xeric shrublands; and

even tundra by way of the sub-Antarctic islands of Macquarie, Heard and McDonald claimed by

Australia (Australian Government Department of Agriculture, Water and the Environment n.d.). As

one can imagine, the variations in climate noted above also greatly impact what crops settlers in

Australia can grow and where they can grow those crops. There are similar ecoregions in Texas and

Australia, however, since Australia is surrounded by ocean there are more tropical regions in

Australia.

Figure 5.6
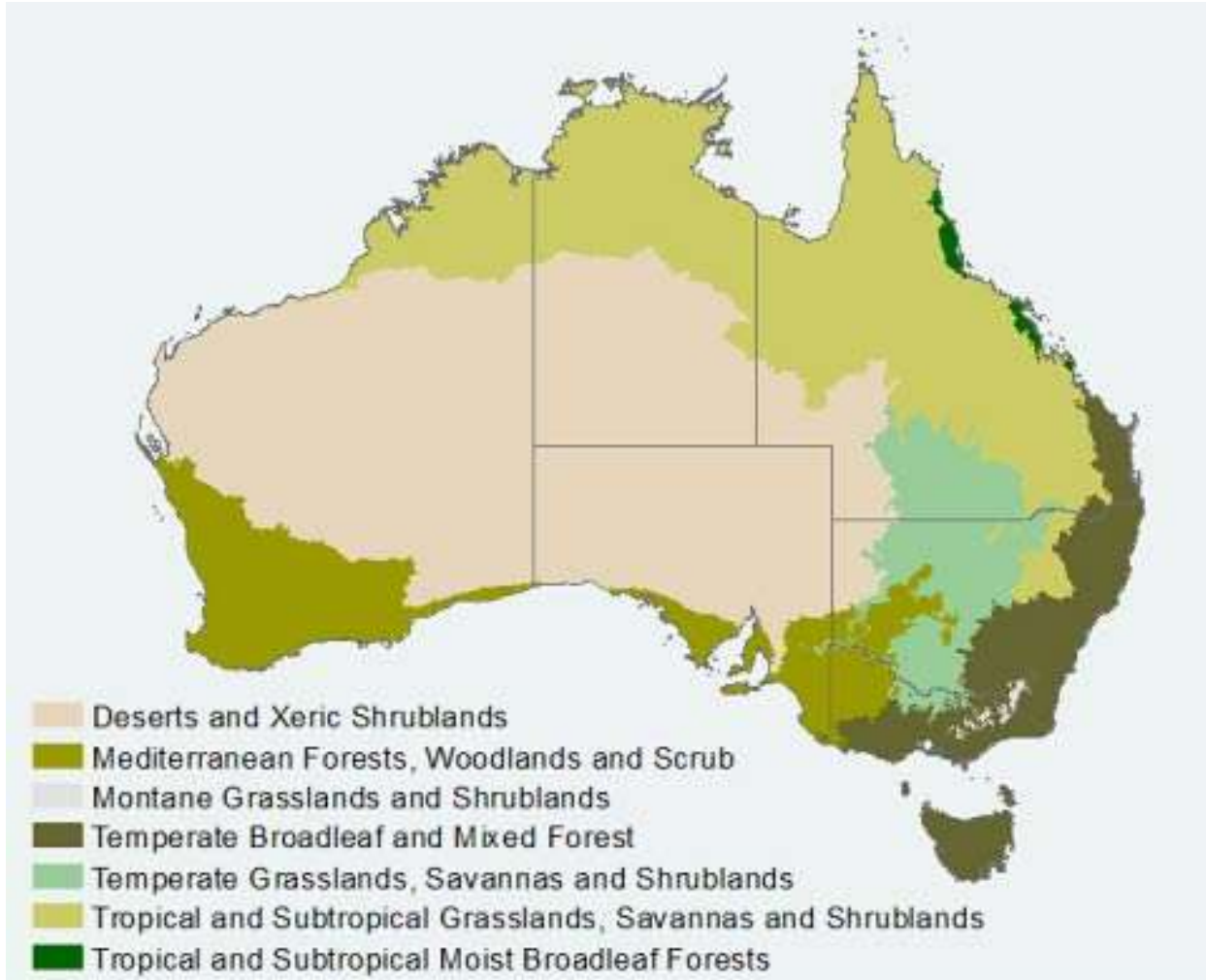
Note. This map shows the difference ecoregions within Australia (Australian Government Department of Agriculture, Water and the Environment n.d.).

Figure 5.7
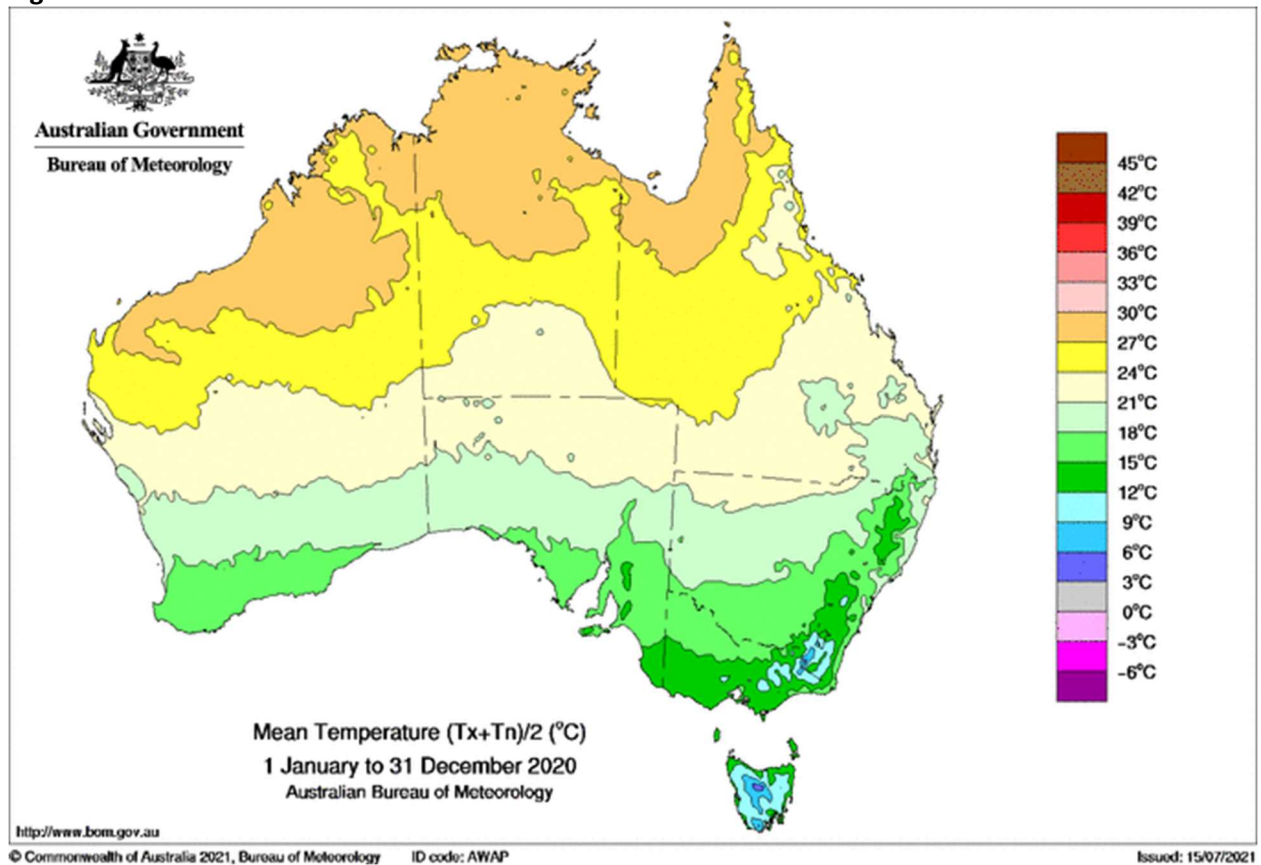
Note. This map shows the average temperature in Australia for the year 2020 (Australian Government Bureau of Meteorology 2021).

European settlers came into Australia with the mindset of growing crops in Australia like they did in their home country. However, since Europe and Australia are vastly different, that was not the best tactic to take for farming as some crops did not do well in the Australian environment. Eventually, the settlers were able to adapt their farming methods so that they could establish successful farms. The first crop to successfully be grown was wheat. It was so successful that it is still one of the primary exports from Australia today (State Library New South Wales [SL NSW] n.d. *b*). Once the settlers were able to get wheat to take hold in Australia, they were able to successfully produce other crops as well. "Plants farmed in Australia range from cereals such as wheat and barley, to fruits like apples and bananas, nut crops, cotton and grapes" (SL NSW n.d. *c*).

There are three other crops that are grown in Australia that need to be mentioned. The first is sugar cane. This crop came to Australia early with the settlers but didn't take off like wheat did. However, "Captain Louis Hope and John Buhot established the first viable cane plantation near Brisbane in 1862" (Australian Sugar Museum 2010:para.2). Along with establishing sugar cane came similar issues that appear in the United States surrounding labor to harvest and process the sugar cane as slave labor and the plantation system were introduced in order to produce this crop. The second crop that needs to be mentioned is grapes as establishing this crop in Australia led to a booming wine industry for Australia that still thrives today (SL NSW n.d. *c*). Finally, the last crop that needs to be discussed are Macadamia Nuts. Australia is "the leading producer of macadamias in the world, Australia contributes more than 30% of the global crop. Each year 70% of the Australian crop is exported to over 40 countries" (Australian Macadamias n.d.:para. 2).

When the first settlers came to Australia in 1788, they brought with them "seven horses, seven cattle, 29 sheep, 74 pigs, five rabbits, 18 turkeys, 29 geese, 35 ducks and 209 fowls" (Australian Bureau of Statistics 2015:para. 6). These animals were not native to Australia and thus began the introduction of species outside of Australia to this continent. They were intended both as a food source and as a means of revenue for those settlers coming into Australia. Sheep actually took off as one of the more important animals for Australia as it was utilized for both the wool and the meat which are both still important products produced by Australia even today (SL NSW n.d. *a*). With Australia having an extensive coastline, in addition to the other bodies of water contained within the continent, fishing became important for those settling in Australia as well. It was used to supplement diets. It became so important that at one point a settlement nearly starved as the fishing dried up (Rääbus 2018).

Since Australia is a fairly isolated island with many distinct ecoregions present, the fauna in Australia differ from what is typically found in Europe. Imagine being a settler and seeing some of

the animals like a kangaroo or a wallaby for the first time! One major difference in fauna from

Europe are marsupials where most species are found in Australia, with just a few (opossums) being

found in the New World. In addition to the marsupials there are other animals like the platypus

which would have seemed very exotic to settlers.

> "Settlers shot platypuses for their value as zoological rarities, then for their fur. They killed
>
> koalas for fur, birds for their plumes, and kangaroos for meat or hides, or just to save the
>
> grass for sheep" (Dunlap 1993:29).

As a result of the unfamiliar fauna settlers imported additional animals into Australia. "The native

animals were not appropriate for the fashionable recreation of sport hunting, and the settlers

brought in deer (some seventeen species or sub-species), foxes, rabbits, grouse, and pheasants"

(Dunlap 1993:28). Some of the various animals brought into Australia became invasive. For example,

in 1860, a shipment of rabbits was brought in which overran the continent (Dunlap 1993:29).

Other Factors Driving Migration to Australia. Accounts of Australia written by those that

were some of the first to see and settle in Australia were sent back to Britain and published. These

accounts of the first settlers in Australia were greatly desired as they gave accounts of the strange,

exotic plant and animal life that existed in Australia in addition to the excitement of exploring a new

land (Mitchell 2017). These type of accounts regarding the exploration and discovery of Australia

continued as settlement into Australia expanded.

In addition to the exploration accounts, another popular form of information on Australia

was an immigrant guide. This type of guide had dual purposes. These guides served as targeted

propaganda for those people considering moving to Australia and the guides had relevant

information for those that had just arrived in Australia. These guides were extensive and included

information on the climate, agriculture, history, politics, land prices, and a myriad of other topics

that would be relevant to those thinking about coming to Australia or were newly arrived in Australia (SL NSW n.d. *d*).

Some of the colonial governments in Australia also targeted specific groups of people that they desired for their colony. They would go after tradespeople that they were lacking in the colony and, in some cases, unmarried women who were of marrying age for potential spouses or domestic help (Migration Heritage Museum n.d.). In order to do this some of the colonial governments would even pay for the cost of the desired settlers to come to Australia. This was done in an attempt to even out the population in the colonies and try to help move away from the image that Australia was only populated by convicts (Migration Heritage Museum n.d.).

There are other aspects driving immigration to Australia. There was persecution for some settlers in their home country. For example, similarly to what drove many settlers initially to the New World, there was religious persecution occurring in addition to economic and political upheaval in Europe which drove people to Australia (Triebel 1960:57). There were economic issues stemming from wars in Europe (mainly between Britain and France) that left a large poor population. This population was seeking something better for themselves and their families and hoped that Australia would allow them to start over (Atkinson 2002). Additionally, the gold rush that occurred in 1851 had a big draw for Australia too. Not only did the gold rush draw people that were already in Australia into areas where gold had reportedly been discovered, but also immigrants came over by the boat load in order to try to cash in on the gold rush.

Which Settlers Are Coming to Australia?

Australia sees settlers coming from some of the same origin countries as those coming to Texas. There is a large bulk of the population coming from the United Kingdom. There is a large German population that makes its way into Australia as well. However, Australia, unlike Texas, is

closer to Asia so that there is significant population of Chinese that makes its way into Australia before the Australian governments curbs their immigration.

United Kingdom. The United Kingdom discovered Australia and then swiftly began populating the newly founded colonies. Initially a very large portion of those settling in Australia were convicts. "Convicts were mainly from England and Wales, with a large contingent of Irish (24 per cent) and a much smaller number of Scots (five per cent)" (National Museum Australia 2020:para. 21). While there were some transported to Australia that did commit major crimes, most of the crimes that were committed by these settlers would be considered petty today and included things like debt or theft. The majority of the convicts were men making up about 80% of the convict population (Smith 2018).

There were free settlers that came over from the United Kingdom as well. They started out mostly as people attached to the penal system to manage the convicts that were being transported to Australia (Atkinson 2002). Then officials within the colony were looking for ways to employ the convicts. In order to do that they needed wealthy individuals that could afford the trip to Australia and had the means to set up farms where the convicts could work. There were immigration guides and other literature specifically targeted at the wealthy that were sent to Britain in order to attract them to Australia for this purpose (Atkinson 2002).

Once the policies regarding transporting convicts to Australia fell out of favor, the colonies in Australia needed to find a population source to help settle the colonies. Targeted campaigns were initiated that went after the desired populations in the United Kingdom. The people from the United Kingdom that responded to these campaigns were those that were seeking a way to start over, often as they faced economic troubles (Atkinson 2002). Families settled in Australia along with other targeted populations as mentioned above.

Germans. German settlers started arriving in Australia in 1836 (Triebel 1960:53). It was not a massive migration at first. The settlers from Germany trickled in while colonies were being surveyed, set up, and established. Once the lands for the colonies were established, combined with some of the religious persecutions that people in Germany faced, the rate of settlers from Germany to Australia increased. There was one entire church congregation led by Pastor August Kavel that migrated together to Australia in order to escape the persecution they were facing in Germany (Corkhill 2002). In 1847 there were 1098 German settlers, but by 1850 there were about 10,000 (Triebel 1960:57).

Chinese. One major difference between Texas and Australia, is that Australia is closer in proximity to Asia than Texas. This makes it somewhat easier for settlers coming from Asia to migrate to Australia. The journey was still perilous and there was ethnic discrimination that they faced once in Australia. "Chinese immigrants included both indentured or contract labourers and free emigrants" (Wang 2002:197). The gold rush was one of the bigger draws for the Chinese settling in Australia. This caused tensions between the white miners and the Chinese. This tension ultimately became a source of discrimination against the Chinese; so much so that their immigration was ultimately restricted by colonial Australian officials (Knott 2002). The Chinese settlers were significant since they were one of the first and largest Asian groups to settle Australia, but overall population of Chinese in Australia was small. "The 1881 censuses counted nearly 39,000 Chinese in Australia, with Queensland having the highest concentration, 5 per cent, and Western Australia the smallest with 0.5 per cent" (Knott 2002:38).

Other Settlers. There were handfuls of other settlers that made their way to Australia. For example, in 1891 there were a total of 518 Belgians in Australia (Lodewycks 2002). Most of the other Europeans came in the same way as the British where they were convicts (sometimes caught in Britain), or they were free immigrants escaping their home country for a better life. Their overall

numbers did not make up a significant portion of the Australian settler population. There are also populations coming from Asia and even from the New World, but again, the total numbers of these populations were very small.

Aborigines

The Aborigines existed in Australia long before Europeans reached the continent. It is difficult to gauge the actual number of Aborigines that existed prior to contact, but the lowest of the estimates puts their population at about 300,000 prior to contact, with some estimates putting the number significantly higher than that (Berndt 2018). The Aboriginal populations are divided up by unique language groups. Impressively there were at least 200 distinct language groups with multiple dialects within those language groups (Berndt 2018). The language groups occupied specific territories within Australia. These groups were spread all over Australia in all of the various ecoregions that exist in Australia, including the harsher, more drought prone regions. For most of the year they were broken up into small groups due to the carrying capacity of the areas they occupied. These small groups would meet up at specific times of the year, for example on religious occasions, in order to conduct social exchanges as well as resource exchanges (Berndt 2018).

The settlers in Australia and the Aboriginal population were not always at odds with each other. "Aboriginal people naturally tried to understand Europeans…[t]his led to attempts to incorporate elements of the European system, including the people, into their own" (Anderson 2002:11). This included incorporating European settlers as kin in Aboriginal groups and even allowing the Europeans access to Aboriginal women (Anderson 2002; Grguric 2009). The goal of the Aboriginal population for incorporating Europeans in this way was reciprocity in order to gain access to the goods the Europeans brought with them or grew, in addition to re-gaining access to the lands the Europeans had taken from the Aborigines.

Depredations. In the literature reviewed for Australia the word depredation hasn't appeared like it does when looking at literature regarding Native Americans. However, that doesn't mean that there weren't acts that could be considered along the same lines as depredations, or at the very least stories of such acts. Much like the depredations noted in Texas, these types of acts in Australia are documented through written sources. For example, "[o]n the central Queensland coast the primary historical sources relating to European/Aboriginal conflict are numerous, consisting in many cases of private hand-written diaries, memoirs of personal accounts of the 'pioneering' experience and newspaper accounts" (Barker 2007:9). There are many and varied accounts of conflicts between the settlers and the Aborigines. "Conflict took the form of Aborigines physically attacking settlers, or burning their buildings, or taking or killing their animals" (Anderson 2002:11).

Additionally, there are a number of massacre stories where one side brutally massacres the other in an act of retaliation. These occurred so frequently that they were given the name of The Frontier Wars. "The Frontier Wars refer to conflicts between Europeans and Aboriginal people including battles, acts of resistance and open massacres from 1788 to the 1930s" (Booth 2016:para. 1). Most of these conflicts seem to arise out of issues related to resource competition. The Aborigines not only had competition with the European settlers for natural resources, but also competed for resources consumed by the livestock, for instance cattle and sheep, that the settlers brought with them (Anderson 2002:12). Since there are locations within Australia where resources are very scarce competition for these became fierce. "Overall, 2000-2500 Europeans were killed by Aborigines during the major periods of settlement" (Anderson 2002:11).

Other Settlement Examples

It is common for humans to experience a level of anxiety when moving from the known to the unknown. It is not unreasonable to expect some level of anxiety from settlers moving from the

lands they knew, into areas around the world that were unfamiliar to them, and attempt to settle in those new areas. In many cases the settlers were the equivalent of aliens, or even squatters, in the new land which could contribute to their anxieties. As a result, the issue of settler anxiety is not limited to settlers moving into Texas or Australia; it can be found amongst other locations and time frames.

Starting in the early 1800s, British settlers formed the Cape Colony in Africa (Chouchene 2020). The settlers were in a land that was new to them, and they were encroaching on the land already inhabited by the Xhosa. Tensions existed and escalated between the settlers and the Xhosa as there was loss of life, loss of animal livestock, and other various property losses fueling the anxieties between the two groups. "The encounter with the indigenous people sparked off a sense of vulnerability amongst the… settlers. They were very often afraid of the presence of threatening 'savages', anxious about their security and in some instances developed panicked responses to real or imagined threats" (Chouchene 2020:446). Stories of depredations, both real and exaggerated, were recorded in the local newspaper which added to the anxiety experienced by the settlers (Lester 2015). The anxieties and conflicts between these two groups ultimately spawned frontier wars and had many, many ramifications for everyone involved. While this paper will not dig into all of the ramifications of the interactions of these two groups, it is important to note that one of the results is that settlers desired and called for firearms in order to help defend against the potential depredations that they might experience (Chouchene 2020:452). This suggests that settlers were wanting and using defense as a way to help mitigate some of the anxieties they were experiencing.

The European settlers that moved into Canada faced similar issues as those that settled in the lower portion of North America. There was contact and tensions with native groups, the settlers were in an unfamiliar land, and they were in a land with a climate that could be very harsh, particularly in the winter. The settlers in Canada experienced tensions with the native groups as the

settlers were taking land that the native groups viewed as their territory. Tensions escalated and in 1885 in the North-West territories of Canada, there was a rebellion lead by the indigenous groups which included the Métis (Monaghan 2013). The Métis are considered those that have a mix of indigenous and European ancestry. "Stoked by the sensationalism of Eastern Canada's media, Canadian settler society was gripped by concerns about Indigenous retaliations following the end of the rebellion" (Monaghan 2013:136). This led to calls by the settlers for the Mounties (a police-like entity in portions of Canada) to lead a more active role in the protection of the settlers. As a result, the Mounties expanded the number of outposts they controlled and used their "patrol system to increase police attempts to address perceived Indian crime—particularly horse stealing" (Monaghan 2013:129). It appears that the actions put into place by the Mounties helped to keep larger scale tensions from escalating like they did in 1885. These steps "were integral in providing security and easing the feelings of insecurity held by the settler population" (Monaghan 2013:143). In this case settlers were still desiring defensive measures.

The last example in Canada runs parallel to one of the tenets of the American ethos, that of rugged individualism. Eventually in Texas the Texas Rangers were formed as a similar group to the Mounties and in other areas within the US, the Army was called in to help defend against depredations. However, individuals still had to protect their own homesteads between patrols. In Texas settlers that had their league and labor of farmland were often on their own. "Frontier settlers often faced harsh climatic conditions and multiple types of danger, such as plagues, droughts, blizzards, and crop failure, as well as attacks from wild animals, Native Americans, and other settlers. Violence was commonplace, and social infrastructure providing protection and care was limited or nonexistent" (Bazzi et al. 2018:7). This paper has already touched on some of the reasons (some reasons that would seem very compelling indeed) why a settler would put up with the

dangerous prospects that could present themselves when they moved into a new land often

seemingly on their own without ready access to help from other settlers.

> "These opportunities and threats on the frontier may have favored individualism through an
>
> adaptive mechanism. In the frontier context, people often had to rely on themselves for
>
> protection and prevention, and to improve their living conditions. Moreover, the
>
> resourcefulness associated with individualism would prove useful in a context characterized
>
> by novel and uncertain conditions. Thus, individualistic traits had an adaptive value: beliefs
>
> and behavior based on independence and self-reliance made people better suited to cope
>
> with the frontier environment" [Bazzi et al. 2018:8].

Settlers being on their own with a sense of rugged individualism would have to solve problems that

presented themselves, including the potential for depredations, on their own with minimal

community support. Settlers having anxieties about moving into and dealing with the unknown does

not appear to be limited to Texas or Australia. In addition, there is this idea of being a rugged

individual facing the dangers of settling the frontier, all the while having to find a way to assuage the

anxiety of these dangers; it is highly plausible that the settlers took steps to defend themselves from

real, or perceived, dangers in this situation.

Chapter VI – Methods

A literature review was performed in order to formulate the archaeological correlates of defense. The first approach to locating archaeological correlates of settlers implementing defensive measures on their dwellings was to look at a database containing articles relating to archaeology in Texas. In order to back up the findings from the database research, additional literature sources from Texas and Australia were used to identify key pieces of information leading to the proposed list of archaeological correlates.

Texas Gray Literature

In order to help identify archaeological correlates relating to defense the *Index of Texas Archaeology: Open Access Gray Literature from the Lone Star State* [ITA] was utilized. "It is the mission of the Index of Texas Archaeology to digitally curate, aggregate, and distribute redacted digital proxies of scarce, limited-production, and born-digital archaeological works produced throughout the State of Texas and adjacent regions (ITA n.d.: para 2). The articles loaded into the database seemed to be primarily from Cultural Resource Management [CRM] investigations in Texas. These types of investigations are often performed before major construction projects to locate any important archaeological finds and ensure that they are not destroyed by the construction activities.

There are 254 counties in Texas. The ITA database was searched for each county individually. The search results included the article name, author(s) name(s), article date, web address for the article, and an article abstract. The search results could be extracted into a text file. All 254 text files were then converted into a spreadsheet tab in a *Microsoft Excel* workbook so that the list of articles could be sorted and filtered as needed. Once the search results were imported

into a spreadsheet, the number of articles obtained through the county search could be determined; it totaled 46,309 results. The oldest article is from 1967 and the newest was from 2021.

The next task was to review all of the articles. Due to the large number of articles the abstract was used to help narrow down the subject matter of the article. For example, were findings related to prehistoric sites, historic sites, a mixture of both, or were there no significant archaeological findings as a result of the investigation in the article. If the article abstract stated that the findings were all prehistoric the abstract was trusted to be accurate, and no further review of the article was completed since that timeframe is out of the scope for this thesis. Likewise, if the article abstract stated that archaeological findings were historic in nature, the article was flagged for a more in-depth review to see if it was from the right type of site (i.e., twentieth century mill versus an early nineteenth century homestead, etc.).

In the beginning stages of performing this review it became apparent that there were duplicate article listings pulled. There were many reasons for the article being pulled multiple times. One of the main reasons is that the search feature on this database is not very robust. Additionally, if a county was mentioned in an article in any capacity, it pulled on the search. For example, if performing a search for Harris County and Galveston County was referenced for context on a map showing the location where archaeological work was performed in Harris County, the article would pull on the search for Harris County *and* the search for Galveston County. Or, if the archaeological work recorded in the articles spanned across multiple counties, then the article was pulled for each county referenced in the article. The web address for each article in the database is unique to the article, much like a DOI address for articles in other journals. Since that web address was unique to each article, the Remove Duplicates feature in *Microsoft Excel* was used to narrow down the list of articles to only unique articles. Once the duplicates were removed this left a list of 2,039 articles that needed to be reviewed. Important to note, even though the list of articles to review was much

smaller once the duplicates were removed, it was manually confirmed that each article from the

original list of 46,309 search results did appear in the condensed list so as to ensure no articles were

left out of the review.

Table 6.1

	Count	Percent
Prehistoric	1011	49.58%
Mixed	233	11.43%
Historic	347	17.02%
No significant results	421	20.65%
Other (i.e., from other states)	27	1.32%
Total	**2039**	**100.00%**

Note. This is the breakdown of the number of articles by subject matter.

In addition to the article search challenges, the articles themselves presented challenges

too. For various reasons data was redacted in some of the articles. This was not surprising as it was

noted on the front page of the website for the database that articles with redaction were included in

the database. What was surprising is there were many articles where instead of redacting specific

information on a page the article would redact a whole page, or in more unfortunate instances,

multiple pages. There were times where, based on the table of contents, the pages redacted in an

article looked like they would have contained information that might have been useful for this

thesis. An example of this would be an article from Montgomery County where pages 16-18 and

part of 19 were redacted so that the results of the investigation were not available due to the

redaction (Helmer et al. 2016). Since there was so much redacted in this article, it cannot be

determined if there would have been anything useful for this thesis in that article. Additionally,

some of the articles pulled in the search were for other states like Oklahoma, Arkansas, or Louisiana.

The articles in this case were discussing native groups in those states and referring back to archaeological work or findings in Texas regarding native inhabitants that was relevant to the work in other states.

An additional problem that presented with the articles was that there was a large focus on the prehistoric and less attention was paid to historic finds. For example, there is an article from 1988 that examines site 41GM23 in Grimes County in Texas. This article references that there were three historic artifacts found and the levels they were found in, but there is no discussion anywhere in the article regarding what the artifacts were (State Department of Highways and Public Transportation 1988). Most likely the three artifacts recovered would not be significant in terms of this thesis, but there is no way to know for sure since they were not discussed in favor of discussing prehistoric components of the site. Another example is from an article where site 41KE51 in Kendall County is referenced. "This site consists of the remnants of a mid-19th century house abandoned about 1913... recommend no further action" (Kelly and Hester 1976:26). There is no further discussion of this site or discussion of any artifacts found at this site. This site could have been useful for this thesis if it was indeed constructed during the mid-nineteenth century as it would have been constructed during the right time frame and therefore would have had the potential to provide archaeological evidence or correlates useful for this thesis. For many articles, when ceramics in any form were present at a site, most of the discussion centered around the ceramics which lessened the time spent discussing other artifacts. Ceramics are very helpful as they can provide a bounty of information, but it would be helpful if other artifacts received the same level of discussion as ceramics did in the articles. There were many other articles like these located during the review of the articles in the ITA database. Articles like these present a problem when trying to identify archaeological correlates and the findings at sites are not fully disclosed in the articles either through lack of discussion or through mass redaction.

Given these issues the unique articles were reviewed, and it was found that twenty-one

archaeological sites fit the criteria for this thesis. The sites discussed below were not occupied by

Native Americans. They were sites that had settler inhabitants occupying the site prior to the Civil

War and were the right type of occupation. The type of occupation that was looked for was a settler

occupation in the form of a farm, homestead, or sites where domestic activities were common as

indicated through historic research included within the article, or by the material remains indicating

domestic activities discussed within the article. This means that articles regarding work on the

Alamo, missions, forts, or dwellings located in urban settings were not considered as those types of

sites would not be relevant to the discussion for this thesis. Please see Appendix A for a summary of

information provided for each site as noted in the articles where the site is discussed.

Table 6.2

Site	Dwelling	Material Remains	Notes
41BO165	--	Munitions	
41BX180	Limestone structure	--	
41BX274	Sandstone structure	Iron tools	
41CD136	--	--	No possible defenses noted
41CE19	--	Munitions	
41CH62	--	Munitions	
41CH371	--	--	No possible defenses noted
41HY37	Built on promontory		
41HG153	--	--	No possible defenses noted
Old Ferry Master's Cabin	Log Cabin	--	
41LN302	--	--	No possible defenses noted
41LN309	--	Iron knife	
41ML140	--	Munitions Door hardware	
41MR51	--	--	No possible defenses noted
41NA328	Built on upland landform (350 feet amsl)	--	
41SM195A	--	--	No possible defenses noted
41SM324	--	--	No possible defenses noted
41SR211	Masonry structure	--	
41VT62	--	Door latches	
41WA46	--	Munitions Gun flint	
41WM1416	--	--	No possible defenses noted

Note. This table shows the sites in the right timeframe and setting. It also notes those sites with possible defenses listed. Please see Appendix A for additional details for each site.

Table 6.3

	Count	Percent
No defenses	8	38.10%
Only Landscape	2	9.52%
Only Architecture	3	14.29%
Only Material Remains	7	33.33%
Architecture & Material Remains	1	4.76%
Total	**21**	**100.00%**

Note. The count and percentage of Texas sites from table 6.2 based on type of possible defense.

Out of the twenty-one sites located, eight, or 38.1%, had no indication of possible defenses noted in the article. This meant that after reviewing the information in the article there were no material remains, architectural features, or elements in the landscape reviewed at the site that had any indications of defense. These sites were still included in this review as it is important to see how many sites that fit the criteria of time frame and occupation type existed with no indicators of defense, versus the number which had elements suggesting defense.

The remaining thirteen sites, or 61.9%, had archaeological evidence noted that could indicate defense. Out of the possible defenses noted, material remains were the most common at 33.33%. Munitions were the largest amount of material remains discussed within the articles. Of the sites that included material remains, 62.5% of the sites had munitions in some form like buckshot fragments, bullets, musket balls, pistol balls, center fire casings, rim fire casings, shotgun shell bases, gun flints, and/or percussion caps noted in the material remains for the site. An additional problem with the articles is the state of the munitions was not addressed within the articles. Put another way, the articles did not discuss if the projectiles were or were not deformed in order to indicate if the projectiles had been fired and/or made contact with a surface harder than the projectile material. The other material remains included iron tools, knives, or door hardware at 37.5% of the material remains. These were included as knives have the potential to be used as a weapon as well as some iron tools. Door hardware indicates that there were physical barriers in place to keep people out of the dwelling.

There were two sites that were built on strategic locations (i.e., landscape) that suggest defense. These sites were built in locations that afforded them considerable views around the dwelling to be able to see potential incoming threats and afforded them protection on sides of the dwelling that had steep angles or drop-offs. These steep angles and drop-offs would make it hard for a potential depredation to occur from those sides on the dwelling. Finally, 30.76% of the sites had

architecture in the form of dwellings that were made out of stone or logs. These materials afford

protection as they are harder to burn, as well as they are harder to puncture with projectiles.

Ultimately, based on the challenges encountered while reviewing the articles from the ITA database,

it is not surprising that there were so few sites that fit the right time frame and there were even

fewer that had any evidence that hints at defensive considerations.

Please see figure 6.1 below. This map shows the location of the twenty-one sites that were

found through the ITA article review. The sites are located in Brazoria, Bexar, Colorado, Cherokee,

Chambers, Hays, Hidalgo, Hood, Leon, McLennan, Marion, Nacogdoches, Smith, Starr, Victoria,

Walker, and Williamson counties. These sites are primarily in the eastern portion of Texas. This is to

be expected as this would be the area of Texas which is easiest for incoming settlers to access since

they would be coming though land routes from the eastern portion of the United States or though

water routes via the Gulf of Mexico. The eastern portions of Texas are also the areas that the

Spanish and Mexican governments were using as a buffer against the expansion of the United

States, so these were the areas where people migrating into Texas were being encouraged to settle

when those governments were in power in Texas. Additionally, "[w]hen Texans won their

independence from Mexico in 1836 the Comanches and their allies were still in absolute control of

the Texas plains. They frequently conducted raids on frontier settlements from San Antonio to

northern Mexico" (Lipscomb 2020:para. 10). This has the potential to make settlers wary of those

areas of Texas in terms of settling there, as they were areas that were known for depredations.

Figure 6.1
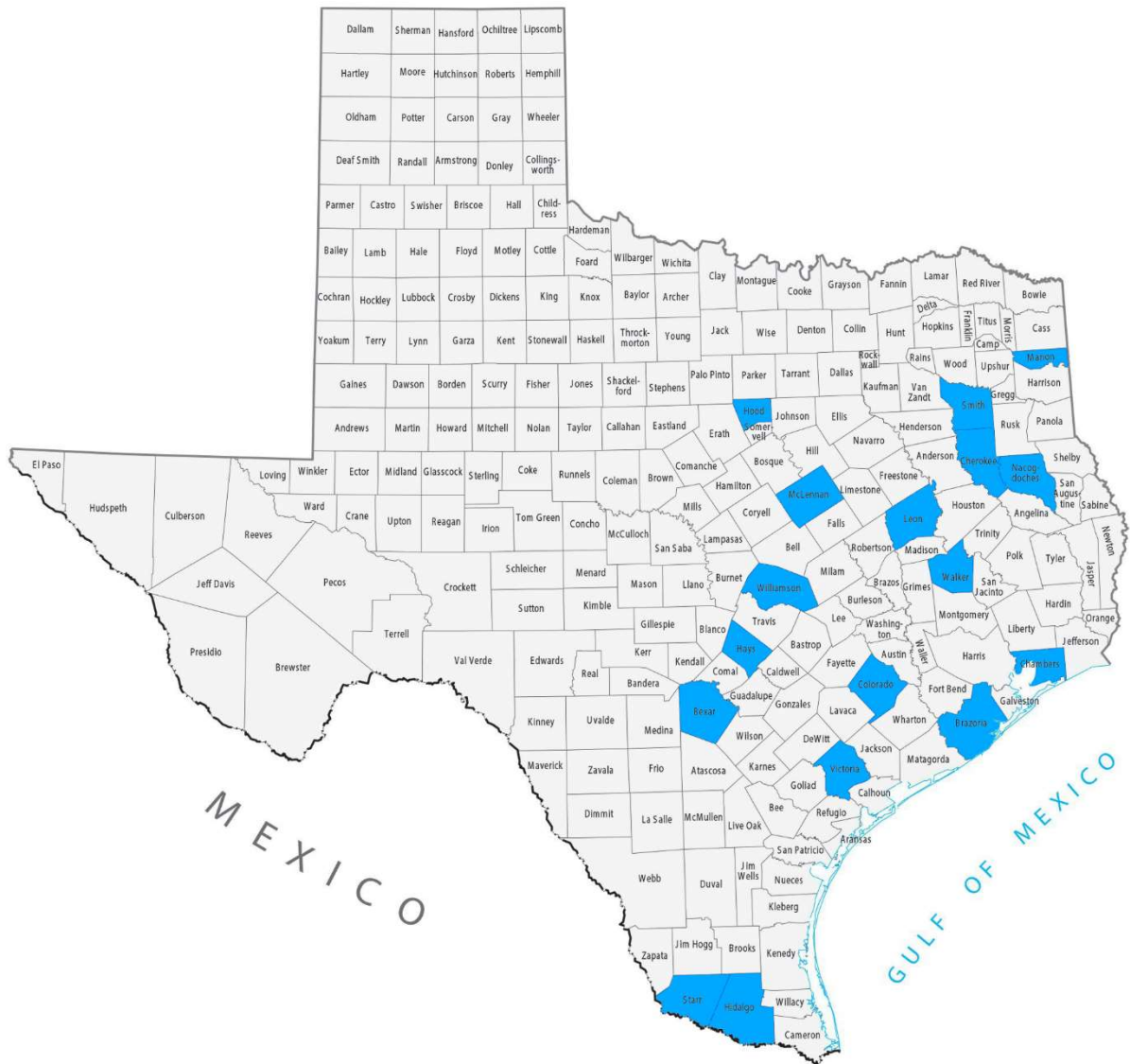
Note. This is a map of the counties in Texas (GIS Geography 2022). This map shows the location of the twenty-one sites that were found through the ITA article review.

The ITA articles are a great resource for information on archaeology occurring in Texas, especially if there is interest in pre-European contact in Texas. However, there were counties in Texas where there were no articles submitted of any type. While it is understandable that some of the more rural counties might not have vast amounts of CRM work occurring; it would be more surprising if since 1967 a highway wasn't widened, a wheelchair ramp wasn't added to an existing

building, or even a new public building wasn't erected in some of the rural counties which would

therefore require CRM work and a resulting article that could be loaded into the ITA database.

Additionally, there may be reasons for not loading an article into the database such as it contains so

much sensitive information that the redacted portion makes the article utterly unreadable.

However, there is a strong possibility that it is not a requirement to load a CRM report into the ITA

database. Also as noted above, when historic archaeology was found on a site, there wasn't as much

attention paid to the historic data. This is disappointing as there is information that could be useful

regarding history in Texas that is now lost since archaeology by nature is destructive.

While utilizing the ITA database did not provide as much information as was hoped in order

to form the correlates of settler defense, looking at the articles does at least hint at what some of

the correlates could be for defense. There are dwellings that are built in what could be considered

strategic positions in the landscape. There are dwellings that are made out of materials that

inherently supply a level of defense, like stone or log cabins. There are material remains like

ammunition, a gun flint which is necessary for some of the older firearms, remnants of a knife, or

even tools that could be utilized as a defense weapon if the need arose, that are present at some of

the sites. Since this search did not fully flush out correlates of settler defense further review of

existing archaeological journal sources is necessary to help bolster what the ITA articles have hinted

at for defense.

Archaeological Correlates

When searching through existing literature on archaeological correlates related to defense,

the majority of the literature tends to focus on defense related to known major conflicts, on sites

where fortification is fairly obvious (i.e., the site of an actual fort), or sites on a grand scale like

entire villages or castles. As a result, it seems like the majority of the literature that currently exists

doesn't allow archaeologists to be able to drill down and look at smaller sites, like a settler's dwelling in Texas, to determine if defense was indeed in place on that site. After looking through literature and knowing that even in modern times people set up defenses on their dwellings, it is the goal of this thesis to work to establish the protocols that could be used to determine if defensive measures are in place on an individual dwelling. To establish this protocol, the information collected about Texas and Australia will be used to help inform the protocols. Additionally, there are elements from the existing literature identifying defense that can help inform the protocols for settler dwellings. The ultimate goal of this protocol is to establish archaeological correlates that could be used as tests when looking at archaeological sites to indicate that defensive measures indeed have been taken by settlers. To establish these protocols, there are several aspects that will need to be taken into consideration for identifying defense. These aspects include the detailed context of the site, landscape of the site, architecture of the site, and material remains of the site.

Context of the Site

The context of the site includes the information that will inform the archaeologist on the specifics of the site in terms of defense. The information provided above regarding Texas and Australia sets the foundation for this process. However, additional detailed information is needed regarding these two locations that will now become imperative to dive into in order to further establish the contexts of the sites in terms of defense. An important aspect for this thesis will be if the settlers felt that they should set up defenses, then it is necessary to understand what weaponry they were defending against. Additional context in regard to the specific site being studied will need to be considered as well in order to help establish if defensive strategies were incorporated on the site in question.

The first piece of information to look at is the weaponry that the native inhabitants could

potentially use in any depredations or attacks. In Australia, generally the weapons used by

Aboriginal peoples consisted of spears, Woomera or Miru which are spear throwers, shields,

boomerangs, and clubs (Mbantua Fine Arts Gallery and Cultural Museum 2021). These weapons

were made mostly out of wood and in the instances of the spears and clubs, could have a flaked

stone tool component. The Native American groups had weapons consisting of spears, Atlatl which

is a spear thrower, bow and arrows, tomahawks, and some groups had shields as well (Klos 2021;

Pauls et al. 2020). Like the Australia weapons, they were manufactured mostly from wood and could

have flaked stone tool components in the spears, arrows, and tomahawks (Texas State University

n.d.; Tikkanen 2006). Important to note about the weapons for the native inhabitants of both

Australia and Texas are how similar they are in terms of how they are used. The Woomera and Atlatl

turn spears into projectiles and the boomerang and arrows are smaller projectiles as well. The

spears themselves can be used at a closer range depending on the length of the spear. Additionally,

the clubs and tomahawks were mostly used close up and in the case of tomahawks could be thrown

as a projectile.

Additional weaponry to consider for Native inhabitants would be firearms. Neither native

inhabitant group would have had any form of firearm prior to European contact. For the Australian

Aborigines acquiring firearms from Europeans was very rare. Generally speaking, the Australian

colonial government did not want firearms in the hands of Aboriginal peoples as those firearms

could be used against the European settlers. One of the rare instances where the Aboriginal people

did acquire firearms was a result of the Australian colonial government creating police force units

consisting of only Aboriginal members and one of the things provided to this police force were

firearms (Jalata 2013).

On the other hand, Native Americans had a much easier time acquiring firearms. There were a variety of ways that the Native Americans could acquire firearms beginning in the late 1600s, which included trading goods produced by the Native Americans for firearms from Europeans and even being provided firearms to secure the Native American's allegiance to a specific country (Klos 2021; Worcester and Schilz 1984). In time some Native American groups, including the Comanche, actively sought to acquire firearms. "Natives eagerly sought firearms not because they were dazzled by the technology. Rather, they realized that differential access to guns had become a key determinant in the rise of some Native peoples, and the vulnerability of others to captivity, enslavement, dispossession, horse raiding, and death" (Silverman and Holden 2016:para. 2).

Another potential weapon at the disposal of native inhabitants is fire. Native groups in Australia and Texas had a significant relationship with fire. Native groups in both locations used fire for a variety of purposes including: "hunting, managing crops, improving growth and yields of wild plants, fireproofing areas around settlements, collecting insects, managing pests, waging war, extorting trade benefits from settlers and trappers by depriving them of easy access to big game (scorched earth policy), clearing travel routes, felling trees, and clearing riparian areas" (Raish et al. 2005:117). These groups also have been documented as using fire during depredations. In both Australia and Texas there are documented instances where fire was used to destroy a settler's dwelling (Roell 2020; Western Sydney University n.d.).

Another consideration regarding Native inhabitants of Australia and Texas would be access to horses. Horses had to be re-introduced to the New World by Europeans and they did not exist at all in Australia until the arrival of Europeans (Mitchell 2016). For the Aborigines in Australia, acquiring horses was much like acquiring firearms. "But nowhere did Aborigines secure sufficient horses to transform themselves into equestrian nomads…or mounted raiders... Instead, sustained involvement with horses came via Aboriginal recruitment into mounted police units and…the sheep-

(and later also cattle-) stations that spearheaded British settlement of the Australian interior"
(Mitchell 2016:328).

Contrastingly, Native Americans had a much easier time acquiring horses. The horses came
into Texas when the Spanish arrived in Texas and horses became widely available for similar reasons
that firearms became available to Native Americans. In the late 1600s the Native inhabitants began
trading with Europeans to acquire horses or the Native Americans were provided horses to help
secure their allegiance to a particular government (Klos 2021). The various native groups actively
sought ways to acquire horses and as a result it had a big impact on their ways of life. "The
introduction of the horse, especially, produced nothing less than a cultural, technological, and
economic revolution, enabling groups to move their habitats, intensify their raiding and trading
activities, and hunt buffalo more effectively" (Klos 2021:para. 3).

Through the review of this additional context for sites, it becomes clear that both native
groups had a variety of weapons at their disposal. They had weapons that they manufactured
themselves and others, like firearms, that they had the potential to acquire from Europeans. Either
set of weaponry had the potential to be, at best, intimidating, and at the worst, deadly. It would not
be hard to imagine that a settler with the knowledge that there was the potential for a boomerang
to be thrown at them would have a similar amount of anxiety as a settler knowing there was a
potential for an arrow to be loosed at them. Additionally, the use of the horse by the native groups
had the potential to increase the range that the group could travel, the speed with which they could
arrive at a location, and the speed with which they could leave a location as well. Adding these
pieces of context to situations that were already tense, increases the potential for settlers to feel
the need to defend themselves against threats from Native groups.

When discussing the context of an archaeological site that is being examined for defense, a deeper dive into the historical and environmental specifics of the actual site in question must be included. Some of this contextual information will also be intertwined with the protocol aspects noted below, but it is necessary to break it out at this point as it should be included in the background information gathered to build a foundation regarding the presence of defense at an archaeological site.

This paper has covered in general terms historical and environmental information in Texas and Australia. However, when moving forward to applying this protocol to a site, specifics must be researched and kept in mind while determining if there were indeed defensive measures on the archaeological site. The specifics would need to include which European settlers actually created the dwelling being investigated. In Australia, some of the settlers built dwellings based on a cottage design originating in Wales and Scotland (Grguric 2009:68). Whereas "Texas Germans, drawing upon their Saxon and Hessian traditions, began building *Fachwerk*, or half-timbered, structures" when settling in Texas (Jordan 2019:para.1). The potential of different types of defenses being used may change depending on the group in question. For example, in Australia dwellings were built in a style common in England and modified in Australia to have openings in the back to assist in defending the dwelling. This distinction regarding which European settler group is present on a site will also drive the physical material remains left behind at a site. Prince Solms who was instrumental in establishing a German settlement in Texas under the Adelsverein, provided a report to the Adelsverein indicating that weapons in the form of rifles, swords, leather armor, cartridges, and gun powder should be sent to help defend the settlers against the native inhabitants (Biesele 1927). In this particular case, the expectation is that there would be material remains left at known German settler dwellings that are able to be identified as German manufacture or style origin like the ones that were requested by Prince Solms. The additional expectation is that other settler groups would

have material remains that are able to be traced back either through manufacture or style to the country where the settlers originated.

The native inhabitant group in the area of the archaeological site needs to be considered as well. The settlers may have felt more anxiety about building a dwelling in an area with one group of native inhabitants over another. For example, the Comanches inhabited a substantial area within Texas and "[t]hey frequently conducted raids on frontier settlements from San Antonio to northern Mexico" (Lipscomb 2020:para. 10). In this same line of thought, the date of construction for the dwelling being investigated will contribute to understanding if defense was incorporated. At times there were treaties established with some of the native groups in Texas. However, these treaties often broke down like a treaty with the Lipan Apaches did in 1842 (Carlisle 2020). If anxiety regarding a potential depredation was increased due to a breakdown in the relationship with native inhabitants, then this may be reflected in the defenses set up for the dwelling. This anxiety reaction to increased tensions is reflected in Australia. The initial dwellings constructed in Australia by settlers often had to be rebuilt as they were not built with methods or materials that could withstand the climate (Guy 2006). However, there were a few contributing factors to the changes in dwelling construction. One was additional settlers with construction experience arriving in Australia (Guy 2006). As settlers expanded into Australia, additional local materials better suited to the construction of dwellings were located. Also, the anxiety that settlers were feeling in regard to negative interactions with native inhabitants were heightened by reports of depredations in local newspapers (Chouchene 2020). As the tensions were fueled by real or perceived anxieties, dwellings were constructed that have added features such as wooden shutters instead of windowpanes, gun holes or embrasures which "appear to have been incorporated when deemed necessary according to local situations" (Grguric 2009:71).

The ecological specifics need to be included as well in establishing the historical context of the site. In both Texas and Australia, there are vastly different ecological zones that exist. Each of these zones have advantages and disadvantages to the settlers moving into that zone that can come into play when determining defense in that particular ecological area. The ecological resources available to create defenses also changes depending on the natural resources available. For example, in Australia, "[l]ocal timber (Red Cedar) was cut for framing, the bricks were made and burnt on site and shells were transported from Newcastle and burnt and crushed for lime" to be used in mortar for a dwelling built in 1821 in New South Wales (Guy 2006:1497). Those constructing the dwelling were using the ecological resources that existed in Australia to construct dwellings as importation of resources was costly and could be unreliable since it had to arrive by ship. This is similar to what is seen in Texas as the ecology drove the building materials used for dwellings. In areas where timber was abundant, log cabin dwellings were often constructed, and for those areas in Texas where timber is not as abundant, structures of limestone or brick were more common (Robinson 2017).

Also, very importantly, have any of the natural resources changed since the area was originally settled? For example, in central Texas along the Colorado River there are six manmade dams for the purposes of flood management and to generate electricity (Lower Colorado River Authority [LCRA] n.d.). These dams certainly impact the flow and location of the Colorado River in this area of Texas. If an archaeological site was being investigated near this river, it would be necessary to understand any changes to the river that would be relevant to the site as natural resources, like a large river, have the potential to be used for defensive purposes. If a dwelling is located next to a significant body of water, the side of the dwelling located closest to the water is better protected from potential depredations. If a group wanted to attack a dwelling coming across a body of water, they would have to be proficient in attacks via water in order for that method to be

successful. Additionally, dwellings located "atop a steep riverbank…to help provide better

observation of potential threats" would be another advantage of building a dwelling next to a body

of water (Grguric 2009:76).

Finally, are there any historical references to defense noted for the archaeological site in

question? These references can sometimes be very brief, but if they exist, they can contribute to the

context of the site. In Australia there is a dwelling discussed where a reference is made to "its two-

storeyed walls complete with gun-slot loop-holes against Aboriginal attack" (Dolling 1981:213;

Grguric 2009:61). Or in Texas where "German houses are often supplied with beautifully cut

balustrades. This practice, besides being ornamental also lends a greater degree of privacy and

security" (Wilhelm 1968:180). The balustrade acts like a fence on the dwelling. "[A] balustrade is a

row of small columns topped by a rail. The term is derived from the form's constituent posts, called

balusters" (Architectural Digest 2015:para. 1). These historically referenced clues, however brief,

provide key information for the archaeologist in order to determine what was going on in terms of

defense on a site.

All of the pieces of information above combine together to paint a much more in-depth and

complete historical context of the archaeological site in question. This context arms the

archaeologist with more information going into an investigation so that there is an awareness of

what defenses could be found at the archaeological site being investigated.

Landscape

For the purposes of this portion of the thesis, landscape is referring to "the landforms of a

region in the aggregate" (Merriam-Webster n.d.:para. 1). In other words, a landscape is the natural,

ecological features that may exist around a dwelling. This becomes important as natural features

can be used for defensive purposes. Examples of this were previously noted above in the *Pro* section

discussing German settlements where structures were built next to a bluff or on a hilltop as part of their defense considerations.

Selecting a suitable site for a dwelling with defensive features in mind doesn't only occur in Texas. There are two specific dwellings in Australia which were strategically placed on the Australian landscape that Grguric investigates in terms of defense. An "example of defensive siting in the cases of Springvale and Mount Benson is the location of the structures atop a steep riverbank (as in the case of both of the Springvale structures investigated) or a hill (as in the case of the Mount Benson dwelling)" (Grguric 2009:76). The findings indicate that these dwellings were placed in those locations as they allowed the inhabitants better vantage points in order to detect incoming threats.

Another structure, known as Cambridge Downs, in Australia where the site for the dwelling appears to have been strategically selected as well. "The site of the homestead, well out on a clear flat 300 metres away from the wooded Cambridge Creek, is supporting evidence of the pioneer's defence strategy" (Travel & Events Queensland [TEQ] n.d.:106). The placement of this dwelling again allows for a clear vantage point around the dwelling so threats can be detected in a timely manner.

These examples indicate that consideration was taken in terms of using the landscape for defensive purposes. The issue with these examples though is that there is no indication from historical sources that the settlers selected these sites for the defense of their dwellings. This opens the door for ambiguity in terms of if they were selected for defense or if it is just the opinion of the person writing the article about the dwellings. Therefore, it would be prudent to look at more scientific methods in order to assess defensiveness of the landscape surrounding the dwelling. This is another area where pulling in from other studies would be helpful.

Researchers interested in demonstrating defense at archaeological sites are attempting to be more scientific by developing formulas in order to quantify the defensiveness of the landscape

for the site being investigated. This thesis would like to propose that if these formulas are truly

accurate at determining defense, then they should be applicable to all structures being investigated,

including settler dwellings. This would help solidify the formulas' ability to determine defense

regardless of the structure that is being investigated, as well as lend a quantifiable element to the

protocol for this thesis in terms of the landscape being a part of the defense that is utilized for

settler dwellings. There does not appear to currently be a formula developed for this line of research

in Texas or Australia. As a result, it is necessary to look at other literature out there to see if this

exists. There are undoubtedly several purposed formulas out there in the literature. However, since

that is not the entire focus of this thesis only one was selected for discussion. Perhaps a future line

of research in this topic could be looking for other formulas and narrowing down the formulas that

quantify defense to one specific formula, or a set of formulas as seen in the example below, that are

consistently accurate so that those can be standardized and used going forward on these types of

investigations.

The formula discussed below comes from a study by Martindale and Supernant which uses

four key elements and combines them to create a defensibility index. This formula was established

for use on the Northwest Coast of North America. However, if this is an accurate formula for

determining defense it should be applicable anywhere. In order to attempt to simplify and condense

the formula a chart has been created to better outline the components of the formula. Please

reference table 6.4 below.

Table 6.4

Visibility	Degrees of visibility in excess of 100 m ÷ degrees of approach around site The sum of visibility across land and water divided by the total arc of approach (360° or less). The function returns a value between 0 and 1.
Elevation	Degrees of elevation difference ÷ 90 Elevation difference from approach routes to the highest point of the site. This value is divided by 90 to returns a ratio of 0 – 1.
Accessibility	[360° - P(degrees of approach) ÷ 360] + [(degrees of approach around site - degrees of access) ÷ degrees of approach] ÷ 2 Arc of circumference that offers access to the site (not considering any defensive features like walls, ditches, etc.) across land and water. The approach, or avenue in which a person can come within range of a defender, but not get access, is expressed as 1) a fraction of the total circumference of the site and 2) a fraction of the approach and access to the site.
Area	Site area ÷ maximum area Site size can influence both access and defense since large sites are easier to access and thus more vulnerable to attack. Area calculation is measured as a ratio of the specific site being investigated against the estimated largest site in the area. Largest site is arbitrarily defined as 1,000,000 m^2.

Note. These are the four components that are added together to create the defensibility index (Martindale and Supernant 2009:195).

Each of these four individual calculations should be on a scale from zero to one. Each component is then added up for a total score and should be on a scale from zero to four. A score of four would indicate that site is in an extremely defensive location on the landscape; this then means that a score of zero would indicate that there are no defenses on the landscape for the site. This formula could be good because it is set up to indicate total defensiveness of a site in addition to allowing each of the individual components of defense to be compared individually across sites. There are of course issues like the arbitrary maximum area, but that again would be considerations for future research on the effectiveness of this particular formula for determining defense on a variety of different sites.

There is one final consideration in terms of landscape for defense. Settlers have the potential to alter the landscape in order to provide defense for their dwellings. Altering the natural landscape for defensive means is something that has occurred in many different cultures and has been documented on prehistoric and historical archaeological sites (Keely et al. 2007). It would be reasonable to expect that settlers could do the same for their dwellings. For example, having a ditch dug around the house would make it harder for someone to reach the dwelling and therefore harder to reach those that are taking refuge in the dwelling. If a ditch is dug around a dwelling, or even around an animal enclosure, it is there for defensive purposes as it is extraordinarily labor intensive to construct this type of feature (Keeley et al. 2007). The earth removed from the ditch could be utilized in turn to create a redoubt around the dwelling.

> "Historically, redoubts consisted of enclosed fortifications constructed outside a larger fort. Often hastily built, it relied on earthworks and or stone and wooden timbers. It's main purpose was to shelter soldiers posted outside the main defensive enclosure or fort. They were either permanent structures made of more durable goods, or quickly thrown up to thwart an enemy's approach to the main fortification. [Schenawolf 2018:para. 8].

While the information above references redoubts in terms of forts, it is possible that settlers would do something similar around their dwellings to help fortify their dwellings defenses, especially if any of the settlers had ever been involved in any kind of military action. Even if they hadn't been involved or had formal military training, they may still have been aware of the concept. For example, George Washington was not known to have received formal military engineering strategy training or education, but he was aware of concepts and used them in the American Revolution (Freeman 2020). These types of defenses would have to be identified through very careful examination of the soil deposits so that any disturbance in the natural soil stratifications can be identified and recorded in order to determine what types of alterations to the natural landscape took place on the site.

Architecture

Sometimes archaeologists are fortunate and the structure they are investigating is still intact with mostly upright walls. When this is the case there is significant investigation that can take place. This is also where the additional context of knowing the origin of the settlers that created the dwelling can be very helpful. Knowing where the settlers came from can allow a comparison to take place between the architecture where they came from against architecture in their new land to see if there are modifications in the architecture. "This is useful because it helps to deduce the intended tactical role of the structures investigated and to provide a basis for comparison…against which other civilian sites can be compared" (Grguric 2010:52).

When these comparisons are made, details can be teased out that indicate dwellings were constructed with defense in mind. Grguric (2009) notes that dwellings in Australia tended to follow a standard British cottage design and this design does not include windows or opening on the rear walls of the dwelling as that wall was typically facing the very cold, northern winds in Britain. However, looking at the dwellings in Australia built by British settlers finds that the dwellings following the same cottage design have small openings in the rear wall. These openings were not included in the typical cottage in Europe, but "they appear to have been incorporated when deemed necessary according to local situations. Therefore, these apertures constitute an important and significant modification to the Australian vernacular" (Grguric 2009:71). The argument may then arise that Australia is significantly warmer that Britain, so these openings were added for ventilation. This is where keeping context in mind is important. Sure, ventilation could be a factor in the placement of the apertures, but there are other factors to be considered. If these apertures face another building on the property, like a storage facility or a barn-like facility then that is much more significant as that aperture gives a line of sight to those buildings and allows for a defensible position should a raid be conducted on the storage facility. If these apertures do not line up with the

prevailing winds to help facilitate ventilation, that is also significant as they aren't being used for

ventilation purposes. Additionally, if there are any historical references to back up the reason why a

settler changed up the architecture on the dwelling, this adds to the support that the change was for

defensive purposes as well. Interestingly, a similar modification can be found in dwellings in Texas

where "[v]isible evidence of a settler's concern with defending his homestead against such raids is

today still apparent in small, tapered windows that served as gun slots" (Wilhelm 1968:35).

In Australia on these same dwellings there were windows on the front or the side that were

intended for light and ventilation. Knowing that if any depredations were to take place there was no

guarantee that it would only occur from the rear of the dwelling; these windows had wooden

shutters on them. "These [shutters] could be locked in the event of a threat, or at nighttime, and

could also have embrasures built into them, thereby rendering a dwelling very secure and well-

designed as a defensive structure" (Grguric 2009:73-75). The ability to make the dwelling more

secure through the use of shutters is something that occurs in Texas even today. So, if this was

occurring in the past in Australia, it is not a hard stretch to picture shutters with defensive purposes

occurring on settler dwellings in Texas as well.

A comparison of architecture from where the settlers came from against what was

constructed in the newly settled land can be very helpful for identifying defensive changes. Utilizing

this comparison, dwellings can be located that may still fall in line with the architecture that the

settlers know from their country of origin but have obvious defense features built into the dwelling.

In Texas, a ranch exists where it appears that defense was on the mind of the settlers that built it in

1830. This can be seen in the architecture of the dwelling. The ranch "has 26-inch-thick walls, no

windows, two 5-ft-tall towers with gun ports, and a flat roof with a lookout perch" (Sullivan

2019:para. 22). It also has a defensive wall that surrounds it which doubles as a fence to keep

livestock safely enclosed. The key with these features on the dwelling is that they go above and

beyond what would be necessary to keep a standard dwelling upright. It is not necessary to have

twenty-six-inch-thick walls to support a roof on what most would consider a house. Nor is it

necessary to build an actual wall to help contain livestock. When driving down rural roads in Texas

one of the more common fence types that is visible from the road around a farm, or a ranch is a split

rail fence, which is significantly less of a defensive measure than an actual wall.

The examples above are discussing standing structures. Archaeologists rarely have the

opportunity to investigate structures that are still standing. However, this does not mean that the

wheel needs to be reinvented for this protocol. Archaeologists have long been able to successfully

excavate post holes and building foundations for structures that are no longer standing. This should

not be any different for this protocol. Sites should be able to be excavated with proper

archaeological techniques in order to uncover these remnants of structures in the ground. "When

investigating a site, the archaeologist's first priority will probably be to find and record its edges, its

internal lay-out, and identify structures such as walls, banks, ditches and hollows which only then

may be interpreted as defences, houses, roads, pits… and many other types of structure" (Levick

2011:para. 1). Understandably, there will be less data available for structures no longer standing but

identifying an unusually thick outer wall, or a wall where a fence would be expected, would still

inform an archaeologist about what is going on in terms of defense at the site.

Under the context section it is noted that fire could be a potential weapon involved in

depredations. However, it is important to note that due to the relationship that the native groups

have with fire, using it in this way on settlers was not common. There are clearly documented

instances of dwellings that were burned by native groups, but those are the exception versus the

rule. This is due in large part to the types of dwellings used. Dwellings made of stone are not easy to

catch on fire as stone is not typically a flammable substance. Also, contrary to what movies may

show, dwellings made of timber or logs are not easy to catch on fire either (Wakefield et al. 2007).

Logs are hard to catch on fire, which is why when starting a campfire kindling is used first to start the fire before logs are put on the campfire. Additionally, as a log burns the charred portion of the log can act as a buffer between the fire and the fuel source slowing or stopping the spread of the fire (Wakefield et al. 2007). There is also very little space between logs which hampers oxygen flow to a fire making it difficult for the fire to spread in-between logs.

Settlers using stone or logs for their dwellings is a defensive choice since these materials do defend against fire and potentially other forms of attack. A possible counter argument to that is the fact that these architecture styles and material choices are not new to Texas or Australia, so it couldn't be considered a defense against potential depredations since it is has existed for a long period of time. However, much of culture is passed down over time through generations. There may be changes over time as technology improves, but cultures generally rely on what they know and have used previously. What this means is if settlers that used to live in Germany made their dwellings in Germany out of logs because that type of dwelling helped to keep the dwelling from burning, there is no reason why using the same principal of a log dwelling in Texas would cause the dwelling to suddenly burn to the ground. That type of dwelling is a culturally known type of dwelling with the benefit of fire resistance, so it would be a good choice to use if the timber resources are available.

Additionally, one of the very basic needs for survival is a source of water. As such, wells, cisterns, or other such water storage was a necessity, especially in areas of Texas where rain doesn't occur frequently. These water storage devices have the added benefit of being available should the need for fire mitigation arise. As settlers were often on their own and not in close proximity with those that could help them, a source of fire mitigation is imperative. However, that being said it is another situation where finding a well or a cistern on a site doesn't automatically indicate that the water storage was there for defense only. This is another instance where context will come into play

in order to determine defense. The size of the water storage device relative to the number of known

occupants of the dwelling would be a good indicator of this consideration. If a family of four is

known to have lived in the dwelling, then water storage capacity that would be more appropriate

for a family of eight or nine is a significant finding. Another consideration is the number of

associated buckets or other implements to collect water from storage. In colonial towns there were

regulations that would require structures with higher fire risk, like a bakery or a brewery, to have

more buckets available for fire suppression than were required for a regular dwelling (Merrimack

Fire Rescue n.d.). While this is a regulation for a town, settlers located away from towns would be

aware that help to put out a fire was likely very far away so they would have to put it out

themselves. So, in this case, having what may seem like an excessive amount of implements for

drawing water from a water storage device would be practical to help put out a fire. Buckets made

of wood or out of leather would fall under the category of material remains, but these implements

must be taken into consideration within the context of the architectural features of a site in order to

indicate defensive capabilities.

Material Remains

In a perfect archaeological world, someone excavating a settler site would find that there

are defensive measures clearly defined in the dwelling space and the artifacts are *in situ* exactly as

they were used by the settlers. However, this scenario is rarely, if ever, the case in archaeology.

Since these perfect scenarios rarely exist, it is prudent to adjust expectations and work to determine

what artifacts should be expected. There are two overall categories that the artifacts can be broken

down into for this protocol. The first would be artifacts used by settlers for defense. The second are

artifacts generated as a result of defenses being in place on the dwelling.

For the artifacts used by settlers for defense, one of the types of artifacts to anticipate would be weaponry. One class of weapon is the firearm. Firearms have been around since at least 1364 (PBS n.d.). The types of firearms have evolved and changed greatly since their creation. "Weapons that were used during the 1600s till early 1800s were mostly muskets, rifles, [and] pistols" (Baez 2018:para. 1). Muskets are not known for their accuracy, and they can be cumbersome to load and fire. With the advent of rifles accuracy improved, but at that time they took a while to load and fire as well. "Muskets were muzzle loaded, which means that the powder and bullet were poured into the barrel. Rifles and pistols, on the other hand, were flintlocked. That means those guns were ignited by flint and steel" (Baez 2018:para. 1). Because firearms at this time required additional implements to load and/or fire them, it is expected that these accessories have the potential to be found at the site of a setter's dwelling. Integrated cartridges were invented in 1808, so advances in firearms need to be kept in mind as well as this provides additional sources for material evidence that have the potential to exist at a site (Bocetta 2017). As with everything else discussed so far, it will be important to understand which settlers were living in the dwelling being investigated. Some of the people coming to Texas did not have a lot of wealth as they were fleeing to Texas to escape debt. As such, it would not be expected that they have the newest firearms available due to cost, so that unless the settler residing in the dwelling is known to be wealthy, older styles of firearms are expected.

The argument will be made that just because the settlers had these firearm weapons at their disposal, doesn't mean they were used for defense. The best guess for the reason for this argument is that a firearm could have been around for hunting purposes. However, just because a firearm can be used for hunting doesn't mean it can't be used for defense as well. This is again where context becomes important. What other items were found in the assemblage? If a dwelling is being excavated and a firearm along with only unused projectiles/accessories for the firearm are

found, then it is a possibility that the firearm wasn't used for a defense purpose as it would seem unlikely that a settler would hunt from the interior of their dwelling. However, if there are other items that can be found as evidence that the firearm was fired, such as a sprue or a spent cartridge in the dwelling, then it is more likely that the firearm was used for a defensive purpose in that context. There are also indications like having lead ingots in the dwelling above what would be needed for periodic hunting that would need to be considered as a sign of defense too. Additionally, pistols were created specifically for defense (The Internet Pathology Laboratory for Medical Education n.d.). So, if a pistol, or its paraphernalia, are located within a dwelling then that is a sign that defense was being considered via firearms.

Firearms during this time were not as reliable as modern firearms and could be cost prohibitive for some settlers. As a result, the next class of weapon to consider would be a bladed weapon. Knives, or even swords, with a metal blade have existed for thousands of years in many parts of the world. The extensive history of bladed weapons will not be covered in this paper since that is not the focus. However, it must be noted that "knives on the frontier were pounded out of files or any other handy piece of metal, there was no standard model" (Chadwick 1988:para. 6). The settlers were initially using whatever materials were available to them to make knives for themselves. Additionally, there is a notable knife that became popular in Texas prior to the Civil War and that was the Bowie knife. "The popularity of the Bowie was established in the 1830s, expanded during the 1840s, and reached its peak in the 1850s" (Williamson 2017:para. 6).

The Bowie knife was made for defense after James Bowie was shot (Williamson 2017). Since the original intent of this knife is defense, it is clear that at least this knife, if not others, were being considered as a defensive weapon in Texas. As a result of its popularity and intended use, the Bowie knife, or other knives found in the assemblage of a settler dwelling could indicate defense. The immediate argument against this is that knives can have multiple purposes which include hunting

and butchering. As gruesome as it sounds, the best way to see what the knife was used for would be to do blade use analysis on it to determine if there is any residue on the blade that indicates it was used as a close-range weapon. Additionally, while the Bowie knife blade is very hard, other materials used by settlers to make knives could be much softer, and if that is the case, looking at the blade for any kind of use pattern will help determine if the blade was for defense or not.

There may be other items that can be used as weapons. Though most would be improvised and would be tough to prove use as a defensive weapon. For example, a cast iron frying pan would make a good, improvised weapon, but they are heavy, and it would be tough to prove it was used as an improvised defensive weapon. However, since the problem presented in this thesis has not been explored by archaeologists in great detail, it is possible that as this area of research develops there will be findings indicating additional items used as defensive weapons.

There are other types of artifacts that could be left behind that indicate defense. Locks in various forms have been around for several hundreds of years, if not longer, and they were used on a variety of things which includes doors (Hopkins 2018). It is reasonable to expect that if a settler has anxiety about where they are settling, putting a lock on their door would be a step to help ease that anxiety. Door locks and padlocks have been found by archaeologists in Australia at sites known to be settler dwellings (Stankowski 2004:9). Since there are similar settlers going to Australia and Texas, it would be likely that settlers in Texas would have and use locks as well. This means locks and keys would be additional evidence of defense.

It was difficult to come up with a potential counterargument for locks and padlocks being evidence of defense as locks in any form inherently imply creating a barrier that others can't easily pass through in order to protect what is on the other side of the lock. The only real issue would be that locks are generally securing items and can't be pinpointed to be specifically used for locking

against native groups or locking against any other group. However, "stimuli that threaten personal safety produce anxiety responses" (Burke et al. 2017:158). The potential for threat from native groups produced anxiety responses in the form of defense. So, it is very likely that locks were utilized as a manifestation of defense for the dwelling in response from potential threats from native groups.

The other material remains that would exist would be artifacts that are generated as a result of the defenses. This would be anything that shows the defenses worked, at least in part, against depredations by native groups. As discussed above, the types of weapons that were available to native groups is known. This includes the fact that many native groups in Texas had access to firearms. If firearms were involved in depredations there is the potential for evidence to be left behind. This could be in the form of an impact crater left behind on architecture as a result of a firearm being fired at the settler's dwelling. One area of defense "which has only recently attracted the attention of conflict archaeologists is the impact craters created by musket balls and other types of ordnance when they struck stone-walled buildings" (Pollard 2014:2854). This of course indicates that by the time the archaeologist gets to the dwelling it is still somewhat upright. Since that is not always the case the projectile that made the crater would be the next artifact that would be considered. Under the assumption that the firearm was aimed at or near the dwelling involved in the depredation then the ordinance that was fired is likely to be found around the dwelling. If it did indeed strike a defensive wall, then it would be expected to find the ordinance next to the wall it hit. In this case, it would be expected that the ordinance left behind would be concentrated in one area of the dwelling and that the ordinance would largely be deformed. The reasoning behind this is that most likely if a depredation did take place it would be from one side of the dwelling that would be strategic for the attackers, and once fired, there will be a deformation or distortion to the ordinance, most likely when it came into contact with a surface that would indicate the ordinance

was fired instead of merely lost by accident (Ferguson 1977:66-69). This would be evidence that would be left behind even if the walls of the dwelling are not standing.

There is also the potential for lithics to be found at dwelling sites in Texas. A loosed arrow will not be able to create the impact crater that ordinance will, however, lithics being found at the settler's dwellings, especially near a feature like a wall, is evidence contributing to defenses being in place and working. It would be expected that the finding of the lithics would work similarly to ordinance from a firearm. The lithics would likely be concentrated on one area of the dwelling that would be strategic for the attackers. However, whether or not there was any deformation to the lithic would largely depend on the surface that the lithic struck and if that surface was harder or softer than the stone from which the lithic was created.

Table 6.5

Context	• Basic history of the area being investigated
	• In-depth knowledge of the site
	   o Which Europeans occupied the site?
	   o Which native groups occupied or were located near the site?
	   o Date that the site was established
	   o Specifics regarding the need for defense – i.e., weapons used by native groups, access to horses, etc.
	   o Other specific details important for the site in question

Landscape	• Natural features present that could provide defense
	   o Historical references noting the site was selected due to natural defense
	• Use of a formula to generate a quantifiable measurement of defense for the site.
	• Alterations to the natural landscape that were labor intensive
	   o Ditch dug around the dwelling
	   o Redoubt-like structure

Architecture	• Differences in architecture from where the settlers originated • Context of the modification to the architecture at the site • Deviations from basic constructions or needs – i.e., wall thickness, fence versus wall animal enclosures, etc. • If dwelling no longer standing, evidence recovered using proper archaeological techniques to identify foundations, walls, etc. • Wells or cisterns of sufficient size for fire suppression o Excessive number of buckets for fire suppression

Material Remains	• Artifacts used by settlers for defense
	   o Weapons
	      ▪ Firearms and their accessories
	      ▪ Bladed weapons
	      ▪ Additional weaponry/improvised weaponry
	   o Other artifacts
	      ▪ Locks/keys
	• Artifacts generated as a result of defenses
	   o Impact craters from firearms
	   o Concentrations of ordinance in specific areas around the dwelling
	      ▪ Ordinance found distorted or deformed in these areas around the dwelling
	   o Concentrations of lithics in specific areas around the dwelling
	      ▪ Possible deformation of the lithic in these areas around the dwelling

Note. These are the four components/correlates that create the protocol for identifying defense at a site determined to be a settler's dwelling.

Once all of these aspects of the protocol are investigated then a determination can be made in regard to defense being present at the site. Obviously, if only one aspect, like a single door lock, is found then that does not provide solid evidence of defense for the dwelling. Clearly, the more archaeological evidence in line with the protocol the more likely it is that premeditated defense was put in place by settlers on their dwelling. There needs to be at the minimum a preponderance of evidence from the aspects noted above in order to indicate that the setters did indeed incorporate defense into their dwellings.

Chapter VII – Further Research

This paper is seeking to establish the protocol for identifying defense at a settler's dwelling. This protocol sets the stage for future research by giving a protocol that can be used on sites identified as settler dwellings to determine if defense is in place on these sites. As mentioned above, this will also allow the mathematical formulas for defense in the landscape to be tested as well to determine if these formulas are viable. If not, the next steps would be to either tweak the formulas so that they can be universally applied across sites or develop an altogether new formula that works for all sites to determine the level of defense present in the landscape.

Additionally, since this topic is not fully explored in both Australia and Texas, the additional research to test this protocol needs to happen in order to determine if there are additional landscape, architectural or material remains indicative of defense that need to be considered and incorporated into the protocol. "When analysing a civilian site's supposed defensive functionality, it must be remembered that they were built by civilians and not military engineers, and they were not likely to have been as experienced or proficient as military builders" (Grguric 2009:64). Since these structures were generally built and occupied by civilians, the defenses that would be present at a fort will not necessarily be present in a dwelling built by an average settler. That fact needs to be kept in mind when considering how settlers set up defenses for their dwellings and the additional types of defenses that could have been put into place by the settlers that have yet to be identified.

Finally, if it is found through future research that settlers were indeed incorporating defense on their dwellings, then it would be beneficial to create a ranking system for the defenses so that defensibility can be compared across sites. The thought process behind the need for this type of future research was inspired by the landscape formulas that seek to quantify landscape defensibility. However, in this case the index or ranking would need to be applied to the protocol

aspects so that when different pieces of evidence of defense are encountered on an archaeological

site a quantifiable comparison that can be made. For example, an argument could be made that a

door lock is better evidence of defense than finding a lithic at the base of an outer wall of a dwelling

at an archaeological site. Future research could rank and/or quantify that in order to indicate the

level of defense more accurately at a site.

Chapter VIII – Conclusion

Settlers faced a lot of challenges when migrating to Texas and Australia. They took on those challenges because of a desire for a better life. This caused them to move themselves from the known to the unknown. The settlers faced having to establish themselves in what could potentially be a hostile environment since they were settling on contested lands. The settlers also had the added task of adapting to the new areas where they found themselves. They were settling areas that had vastly different ecoregions than where they came from, and in the case of Australia, had the seasons occurring at different times of the year than they were used to in their native countries. They also competed with the native people for the ecological resources the land offered. In some cases, the settlers were able to peacefully co-exist with the native peoples, and in other cases there was conflict.

Due to anxiety from a potentially dangerous situation arising from conflicts with native peoples, this paper proposes that in an attempt to assuage that anxiety, settlers incorporated defensive measures into their dwellings. Under this assumption, the intention of the thesis is to establish how this could be determined from the archaeological record regarding settlers in Texas, using Australia for a cross-cultural comparison as both of these locations share similar groups of people migrating into them, similar ecologies, and similar conflicts between settlers and the native people.

The first area that should be looked at when determining defense is the context of the site to ensure as much detail as possible is known about the site. This includes locating any and all historical references for the site to see if the settlers themselves indicated they were incorporating defense. It is also important to understand the full range of resources available to the native groups as that will also contribute to the anxiety of the situation and inform what the settlers could have to

defend against. The next consideration is the physical landscape as that can be incorporated into the

defensiveness of a dwelling. Settlers do not randomly pick sites where they established their

dwellings. There are a number of factors that the settlers consider, and defense is possibly one of

these factors. Settlers may also alter the landscape where they erect their dwelling in order to

provide additional fortification for their dwellings. Additionally, the architecture used for the

dwelling is important as that can be examined to determine if features were added for defense. The

dwellings may have physical features like a gun slot incorporated, the specific use of building

materials that provide a level of protection, or an excessively large cistern may have been

incorporated into the dwelling for basic needs and fire suppression abilities. Finally, material

remains, and their location on the site, will also contribute to the defensiveness of a site. The

material remains can include items for defense purposes like firearms and their accessories. The

material remains could also demonstrate that the defenses in place were working such as a

clustering of ordinance concentrated on one area of the dwelling. As is the case with most

archaeology, material remains are all that is left on a site. These remains are most likely the most

important for determining if defense was in place on a settler's dwelling. Once all of these different

areas are considered a determination can be made regarding the level of defense on the site and

whether or not settlers were actually incorporating defense into their dwellings.

This protocol will require additional archaeological work to determine if the correlates are

viable, if other correlates should be included, if some of the proposed correlates should be removed,

and ultimately, they need to be used to see if defense can be determined through the

archaeological record. This is important as this provides additional understanding into the lives and

mindsets of those that settled along frontiers.

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This appendix consists of the sites that were found to be of the right time frame and the right location for a site that could potentially be useful for this thesis. The information was pulled directly from the referenced articles. This means that the information is also limited to what was in the article regarding the site. Where possible, only the artifacts that the articles listed as relating to the timeframe for this thesis are noted below. The information was entered into a series of tables, one for each site.

The exception to that is the Levi Jordan Plantation State Historic Site. This historic site appeared in three articles that involved separate investigations in different locations on that particular site. The information available from the individual articles on that site has been broken out accordingly into their own separate table. The sites are presented below in alphabetical order based upon the county where the site is located.

Table A.1

Site #	41BO165	County	Brazoria
Site Name	Levi Jordan Plantation State Historic Site		
Architecture			
	-Brick fireplace foundation -Brick walkway		
Artifacts			
	-Glass - bottle, jar, chimney, tableware, window glass -Ceramics - creamware, pearlware, white earthenware, transferware, flow blue, spongeware, edgeware, fiestaware, ironstone, porcelain, yellowware, stoneware, colonial wares -Metal - hand-wrought nails, square-cut nails -Munitions - buckshot fragments, bullets, center fire casings, rim fire casings, shotgun shell bases, one percussion cap -Coins -Handmade bricks -Buttons -Analysis of artifacts recovered indicate domestic activities that occurred between the 1850s and the 1950s.		
Reference	Leezer 2006.		

Table A.2

Site #	41BO165	County	Brazoria
Site Name	Levi Jordan Plantation State Historic Site		
Architecture	-Levi Jordan acquired the property in 1848, and the house was completed by 1857. -Two-story Greek Revival structure. -Wood-frame house-oriented east to west. -Pier and beam foundation. -Two chimneys on opposite ends of the house composed of handmade bricks.		
Artifacts	-Ceramic sherds -Non-culinary ceramics -Glass -Buttons -Nails and staples -Miscellaneous metal artifacts (includes cartridges, bullets, coins, etc.) -Unidentified metal objects -Bone and shell -Miscellaneous artifacts (coal fragment, children's toys, graphite, etc.)		
Reference	McWilliams et al. 2013.		

Table A.3

Site #	41BO165	County	Brazoria
Site Name	Levi Jordan Plantation State Historic Site		
Architecture	--		
Artifacts	-Brick -Lead bullet -Lead blob -Lead musket ball -Square nail -Rail spikes -Pot lid -Hoe -Forged iron fragments -Chain link -Munitions in the form of lead musket and pistol balls, and one CSA Tennessee Rifle bullet, were recovered in an area located approximately 40-150 m due north of the eastern-most slave cabin remains.		
Reference	Black and Karbula 2015.		

Table A.4

Site #	41BX180		County	Bexar
Site Name	Walker Ranch			
Architecture				
	-Structures built of quarried limestone blocks, set in sand and lime mortar - limestone is of the Austin formation -One structure is a two-room house oriented facing southeast to catch prevailing winds in summer and sun in the winter -Another structure is a barn with an attached room			
Artifacts				
	-Square-cut nails -Ceramics - ironstone, spongeware, porcelain, stoneware -Glass - containers, window -Scissors -Animal bone			
Reference	Fox 1979.			

Table A.5

Site #	41BX274		County	Bexar
Site Name	The Perez Ranch			
Architecture				
	-Sandstone house walls			
Artifacts				
	-Ceramic sherds - English whiteware, edge ware, transfer ware, Flow Blue -Ceramics all date to the first half of the nineteenth century. -Glass fragments - plates and jars -Iron tools -Cookware			
Reference	Weston 2004.			

Table A.6

Site #	41CD136	County	Colorado
Site Name	William Harbert Plantation		
Architecture			
	-Constructed 1855 - structure no longer exists -Hand dug well -Below-ground cistern -Stacked brick structural pier footing		
Artifacts			
	-Various sizes of cut and wire nails -Various colors and styles of container/vessel glass -Whiteware/ironstone fragments -Flat/window glass -Nuts and bolts -Iron hardware -Horse tack and trappings hardware -Agricultural equipment components -Clothing buttons -A ceramic doll fragment -A glass marble -Brick		
Reference	Norment 2020.		

Table A.7

Site #	41CE19	County	Cherokee
Site Name	George C. Davis Site		
Architecture			
	-Features which probably represent structure footings, two postholes/possible fenceposts -Historic features on terrace edge overlooking Bowles Creek		
Artifacts			
	-Glazed ceramic sherds -Glass -Cut nails -Wire nails -Other iron - fence staples, iron nut, pieces of wire, other unidentifiable iron -Lead balls - two small and roughly spherical, one is flattened -Gun flint - identified as English in origin based on color and the presence of two reduction bulbs on the bed surface; used extensively with considerable flaking on all sides -Floral remains -Faunal remains -Specimens suggest nineteenth and possibly eighteenth century occupations		
Reference	Fields et al. 1980.		

Table A.8

Site #	41CH62	County	Chambers
Site Name	Labadie Site		
Architecture			
	-Brick fragment, but no structural remains found		
Artifacts			
	-The artifactual evidence indicates occupation in the 1830s and 1840s. -Decorated earthenware -Cut nails -Hand-forged nails -Percussion cap for a pistol in use ca. 1840-1860 -Percussion cap for musket in use ca. 1840-1860 -Trigger -Various metal - key fragment, button, fork, hinge -Glass - button, sherds -Animal bone -Shell		
Reference	Fox et al. 1980.		

Table A.9

Site #	41CH371		County	Chambers
Site Name	Homestead of James Taylor White II - South Tract			
Architecture				
	-The home was a two-story, wooden structure built upon brick piers. -Below ground cistern located next to the home. -The front of the house faced south, while a separate kitchen building, attached by a breezeway, was located directly behind the main house to the north. -Single fireplace located along the west wall of the southwest room. -The Whites chose to build east-coast-style homes (Carolina I-houses) in Texas, despite their long sojourn in Louisiana where different architectural styles had evolved to cope with the hotter and more humid climate of the Gulf Coast. -The historical and archaeological data acquired so far indicate that the site was occupied in the 1830s and 1840s.			
Artifacts				
	-Whiteware sherds -Earthenware sherds -Ironstone sherds -Stoneware sherds -Porcelain sherds -Various glass pieces and types -Metal - cast -iron stove fragments, nails, fork, machine part, barbed wire, unidentified -Animal bone -Shell -Brick -Charcoal -Seeds			
Reference	Kelly et al. 2007.			

Table A.10

Site #	41HY37	County	Hays
Site Name	Burleson Homestead		
Architecture			
	-In 1848, Edward Burleson constructed a log cabin on a ridge overlooking the San Marcos Springs. -House is on a high promontory perched 100 feet above the rolling Blackland Prairie and San Marcos Springs. -Stone chimney		
Artifacts			
	-Glass - bottle, jar, tableware, window -Ceramics - dinnerware, earthenware, whiteware, spongeware, edgeware, spatterware, transferware, ironstone, porcelain, stoneware -Doll and game parts, toys - marble -Writing-related Items - slate pencil fragment, slate board -Household items - bone handle fragment, clock key -Clay tobacco pipe pieces -Clothing items - buttons, buckles, snaps -Nails, bolts, and screws -Other metal items - wardrobe lock, copper key, window sash latch, hand-forged cotter pin, hand-forged 'opposite clinch' iron bracket, hand-forged chain links, hand-forged halter bolt, hand-forged harness ring, hand-forged ferrule for a hoe, hay fork, shovel, or other tool -Animal bone		
Reference	Bousman and Nickels 2003.		

Table A.11

Site #	41HG153	County	Hidalgo
Site Name	--		
Architecture			
	--		
Artifacts			
	-Ceramic sherds - variety of hard paste refined earthenware and soft paste earthenware -Metal ornaments - finial with a tri-lobed end and the other is a fragmentary piece, original shape is unknown -The temporally diagnostic ceramic assemblage indicates dates ranging from the 1830-1860s. Estimate of site occupation is 1840s-1850s based on the materials recovered.		
Reference	Kibler et al. 1993.		

Table A.12

Site #	No trinomial noted in the article	County	Hood
Site Name	Old Ferry Master's Cabin		
Architecture			
	-Cabin constructed circa 1856 -Constructed of hand-hewn logs with a single saddle notching to form a locking joint. -While it is known that the cabin is not in its original location, the cabin essentially remains on the same land as when it was originally constructed.		
Artifacts			
	--		
Reference	Hamilton and Howard 2017.		

Table A.13

Site #	41LN302	County	Leon
Site Name	--		
Architecture			
	-Small (20 m in diameter) historical house site on a southeast-facing upland slope (340 feet amsl). -Rock fireplace		
Artifacts			
	-Cut nails -Whiteware sherds -Porcelain sherd -Ironstone sherd -Vessel glass -Milk glass button -Animal bone -Slate -Wire nails -Unidentified nail shanks -Aqua-colored window glass -Iron fence staples -A piece of lead -The range of artifacts found at 41LN302 suggest that the historical occupation here began sometime after 1850 until about the 1890s.		
Reference	Perttula, Nelson, and Lohse 2011.		

Table A.14

Site #	41LN309	County	Leon
Site Name	Cedar House Site		
Architecture			
	-Historical farmstead -Two 3 meters in diameter well depressions -Rock and brick fireplace foundation -About 4 meters north of the fireplace foundation was a 4 m lone line of rocks that may be piers from a structure.		
Artifacts			
	-Ceramics -Bottle glass -Milk glass -Nails - wire, cut, and unidentified shanks -Brick - machine and handmade -Window glass -Metal (cast iron kettle, iron blade with hook, iron knife blade fragment, iron fence staples) -Animal bone -These contrary findings may point to two periods of architectural activity at the site, the first marked by cut nails (1820–1891) and the thin window glass, and the second marked by post-1891 wire nails.		
Reference	Perttula, Nelson, and Lohse 2011.		

Table A.15

Site #	41ML140		County	McLennan
Site Name	--			
Architecture				
	-George Erath established a large plantation around 1850–1851 -The chronology for 41ML140 is based on the artifacts recovered, the features documented, and archival evidence of activity on the property. -Two large mounds of bricks and sandstone rubble were thought to represent two chimneys at the ends of the house. -Well/cistern			
Artifacts				
	-Ceramics (alkaline-glazed stoneware, flow blue whiteware, blue shell edge, blue transfer-printed ware, ironstone, decalcomania, porcelain, and molded blue stoneware) -Handmade bricks -Perfume, olive oil, and patent medicine bottles -Ornamental pressed glass sherds -Miscellaneous metal artifacts such as buttons, a spoon, cut nails, door hardware, fencing staples, ammunition -Animal bone -Shell			
Reference	Scott et al. 2002.			

Table A.16

Site #	41MR51		County	Marion
Site Name	Potter-Ames Cabin			
Architecture				
	-Although parts of the home site were disturbed by construction of [a] road some years ago, limited shovel testing and hand excavations indicate that structural features and yard deposits are preserved on the north side of the road. -The Potter cabin was built on a high bluff overlooking Caddo Lake			
Artifacts				
	-The small artifact sample recovered from the site documents an occupation from ca. 1840 to 1870, with mainly kitchen/domestic and structural/architectural artifacts identified from the site. -Ceramics - porcelain, plain whiteware, hand-painted whiteware, annular whiteware, transfer-printed whiteware, shell-edged whiteware, ironstone, stoneware -Bottle glass -Table knife -Window glass -Daub - has impression of sticks and twigs -Cut nails -Horseshoe nail			
Reference	Perttula 1993.			

Table A.17

Site #	41NA328		County	Nacogdoches
Site Name	--			
Architecture				
	-Early to mid-19th century farmstead on an upland landform (350 feet amsl) -Visible well depression at the site			
Artifacts				
	-Early to mid-19th century whiteware sherds -Cut nails -Brown bottle glass -Aqua-colored window glass -Daub or burned clay -Handmade brick fragments			
Reference	Perttula, Nelson, and Walters 2011.			

Table A.18

Site #	41SM195A		County	Smith
Site Name	Browning Site			
Architecture				
	-No habitation features have been identified in the excavations conducted to date at the site; but the artifacts found thus far suggest there was a structure built on the site that was lived in by at least one family, probably a farming family.			
Artifacts				
	-Sherds from refined earthenware, plates, cups -Iron artifacts, mainly cut nails -Stoneware -Stoneware pipes -Yellowware sherds -Bottle glass -Horse and stable artifacts -The preponderance of evidence [in the form of artifacts] is consistent with a ca. 1840-1860 occupation, one that postdated the Cherokee occupation and is most likely the product of Anglo-American settlement.			
Reference	Perttula and Walters 2011.			

Table A.19

Site #	41SM324		County	Smith
Site Name	Dead Cow Site			
Architecture				
	--			
Artifacts				
	-Stoneware sherds -Whiteware sherds -Earthenware sherds -Bottle glass -The preponderance of evidence [in the form of artifacts] is consistent with a ca. 1840-1860 occupation, one that postdated the Cherokee occupation and is most likely the product of Anglo-American settlement.			
Reference	Perttula 2011.			

Table A.20

Site #	41SR211		County	Starr
Site Name	Stone Cottage			
Architecture				
	-The house was built circa 1850 and was in use until about 1950. -One-story stone masonry rectangular plan house measuring approximately 20 by 33.5 feet with a gable parapet on the north. -Shingle roof -The exterior walls are stuccoed and the interior walls are plastered. -The interior ceiling was originally finished in canvas.			
Artifacts				
	-Lithics -Unglazed ceramics -Glazed ceramics -Glass - olive, gaming piece, chimney -Handmade brick -Bone buttons -Cut nails			
Reference	Meissner et al. 2005.			

Table A.21

Site #	41VT62		County	Victoria
Site Name	Steiner Site			
Architecture				
	-One-story frame house with lumbar siding, a kitchen and what was possibly a smokehouse -Stone foundation -Porch across southeast side -Cellar lined with stone on all sides except east side -Chimney made of cut sandstone blocks with sand and lime mortar -Steiner's arrived in Victoria in the 1850s -1860 census shows the family was in place on the site with a constructed dwelling			
Artifacts				
	-Ceramics - porcelain, hard paste earthenware, pearlware, ironstone, stoneware -Glass - tableware, bottles, food containers, lamp globes, chimney, window glass -Metal - fork, strapping, tin cans, cast iron kettle fragment, broken cast iron griddle, buttons, coins, door latches, hinges, cut nails -Mortar -Shell, 22 caliber -Lead projectile, 22 caliber			
Reference	Fox et al. 1979.			

Table A.22

Site #	41WA46	County	Walker
Site Name	Sam Houston Home, "The Woodlands"		
Architecture			
	-Constructed in 1847 and occupied by the Houston's until 1857. Additional occupations by other owners occurred after that time frame. -Stone chimneys with brick foundation pad -Rear of house had a porch -Handmade brick foundation piers		
Artifacts			
	-Ceramics - earthenware, transfer-printed ware, creamware, blueware, brownware, stoneware, porcelain -Handmade brick -Glass - complete bottles, sherds of various colors and types, milk glass button, chimney glass, window glass, marbles, beads -Metal - iron cut nails, wire nails, unidentified nail fragments, fence staples, hinge, iron chunks, door latch, handle fragments, spur, brass, copper, silver, steel -lead - .38 caliber bullet, shot -Gun flint -Chalk -Slate -Mortar -Stones -Abraded chert -Animal bone -Animal shell -Coal -Wood -Graphite -Leather strap		
Reference	Pevey 1981.		

Table A.23

Site #	41WM1416		County	Williamson
Site Name	--			
Architecture				
	-Partial rock fence constructed as early as the late 1840s -2,331 feet (710.5 meters) long -Ranges between approximately 2 to 4 feet (0.61 to 1.22 meters) in height -Local limestone -The height and double-walled construction of the wall suggest that its purpose was to control livestock.			
Artifacts				
	No historic -age or prehistoric-age artifacts were observed during the archeological survey of the rock fence			
Reference	O'Keefe et al. 2020.			

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