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The Claremont Foodshed: A Historical Analysis

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Environmental Analysis – Senior Thesis

Introduction

The Claremont Foodshed: A Historical Analysis

On the southeast corner of the Pomona College campus a small community farm and lush oasis is nestled in the suburban jungle of Claremont, California. ‘The Farm’ is a two-acre food forest that produces a wide variety of annual vegetable crops, fruits, and perennial herbs and berries in a landscape otherwise covered largely in asphalt and lawn. The Inland Empire of California, which Claremont straddles the border of, has a harsh semi-arid climate, filled largely with housing developments, freeways and often, a good deal of smog. While Claremont has found a little more space to breathe life into the landscape, the Farm remains a unique space in the town and is where I have found myself most at home during my four years here.

From my experiences on the Farm and in the classroom studying environmental analysis , I have developed a great interest in sustainable food and farming. While many refer to the Claremont Colleges as existing within a bubble from the outside world, I feel that in my four years I have come to intimately know the land and community of Claremont, often best through my efforts to engage in activities related to food and agriculture. I have come to know Claremont through my hands in the soil and fresh picked food in my stomach, through conversations at farmer’s markets and seed swaps, while turning compost piles.

The failures of the modern food system, destructive to the natural environment and inadequate in providing the world’s population with sufficient food or nutrition, posed against a great variety of emerging alternatives, has led me to study and engage in local, grassroots efforts to create new (and remember old) ways of feeding ourselves. In this project, I focus on the

development of the Claremont area and the role that food and agriculture have played in its history. Additionally, I discuss the current situation and the local food system alternatives that are emerging.

Throughout this introduction I aim to outline the major issues and concepts that have motivated the project, all of which have first originated from experiences farming, cooking, and organizing around food and agriculture issues. In presenting the focus of my research, I also highlight some of the literature that has inspired it and given a powerful voice to the alternative food movement. The articulation and discussion of the movement is essential to achieving its goals and the authors and works mentioned below do so with particular clarity and originality.

We all need to eat. To eat well and with full knowledge of the story of our food is at once a privilege, a choice, and a basic human right that all should have, though many are denied. Moreover, as author Michael Pollan has aptly premised, the way we eat constitutes our most basic and profound engagement with the natural world (*The Omnivores Dilemma*). Food offers just one pathway for rethinking our communities, our relationship to the environment, and the structure of global society as a whole. I focus on food because I see the implementation of food system alternatives based in local economies as a particularly significant way in which very tangible and powerful changes can be made.

In the article ‘Coming Into the Foodshed’, which I will discuss in detail later in the introduction, Jack Kloppenburg, Jr., John Hendrickson, and G.W. Stevenson offer reasoning for focusing on food systems issues. This describes well many of my own motivations for studying food and agriculture issues and engaging in the work of forming alternatives to the global food system.

Ultimately, what sustainability requires of us is change in global society as a whole. We need the recovery and reconstitution of community generally, not simply in relation to food... To begin the global task to which we are called, we need some particular place to begin, some particular place to stand, some particular place in which to initiate small,

reformist changes that we can only hope may some day become radically transformative. We start with food. Given the centrality of food in our lives and its capacity to connect us materially and spiritually to each other and to the earth, we believe that it is a good place to start (Kloppenburg et al. 1996).

The Modern Food System

In the United States, the food on our plates has traveled an average of 1500 miles, changing hands at least half a dozen times along the way. (Kloppenburg et al. 1996) Throughout every season, supermarket shelves are stocked with produce from across the country and around the world. Despite appearances that our national food supply is abundant, secure, and affordable, the global food system has separated us from the true stories about how our food is produced, processed, and transported. En route from seed to table, the foods we eat often cause great destruction to natural ecosystems and human communities. While advocates of industrial agriculture see such a method of food production as the path towards a more stable food supply for present and future populations, the destruction that has resulted in fact poses grave threats to the long-term security of our food supply.

I hope here to highlight some of the most serious challenges the global industrial food system presents us with. This list is by no means comprehensive, but covers many of the issues that are most urgent and cry out for mediation.

The industrial agriculture that supports our global food system is largely dependent on crop monocultures, fossil fuels, chemical fertilizers and sprays, abundant water, and migrant laborers who work for low wages in poor conditions. These processes have significant impacts on the quality of air, water, and soil, and rates of biodiversity. The use of heavy machinery on fields, chemical fertilizers, and over-tilling of the fields strip the land of its fertility through soil compaction, erosion, and topsoil loss. The National Water Quality Inventory has reported that agricultural non-point source pollution is the leading source of water contamination in surveyed rivers and lakes and

a major contributor to ocean contamination (USDA 2000). Additionally, most large- scale industrial farms are supported by the labor of migrant workers who typically bear the greatest burdens of industrial agriculture, as they live in areas where the water and air are contaminated by pesticides.

In every step of food production and transport, industrial agriculture consumes great amounts of fossil fuel. We now know that our food system plays a major role in global warming, an issue that Michael Pollan has explained with clarity, noting the sheer inefficiency of industrial food production:

After cars, the food system uses more fossil fuel than any other sector of the economy — 19 percent. And while the experts disagree about the exact amount, the way we feed ourselves contributes more greenhouse gases to the atmosphere than anything else we do — as much as 37 percent, according to one study. Whenever farmers clear land for crops and till the soil, large quantities of carbon are released into the air. But the 20th-century industrialization of agriculture has increased the amount of greenhouse gases emitted by the food system by an order of magnitude; chemical fertilizers (made from natural gas), pesticides (made from petroleum), farm machinery, modern food processing and packaging and transportation have together transformed a system that in 1940 produced 2.3 calories of food energy for every calorie of fossil-fuel energy it used into one that now takes 10 calories of fossil-fuel energy to produce a single calorie of modern supermarket food. (Pollan 2008)

Over thirty percent of the best quality farmland in the US has irretrievably been lost to development and as much as 70% of the remaining prime farmland is directly threatened by urban and suburban sprawl (Community System Assessment). In 1935, there was a peak of 6.8 million farms in the United States. This number has declined dramatically since then, though we have seen a slight increase in farms in the last few years. Today there are about 2.2 millions farms nationwide (USDA 2007).

Economic and social challenges also plague the farm sector. Many U.S. Farmers, particularly those with small farms, find that market forces have squeezed them to a point where it is difficult to make a living producing food. The average net cash income per farm is \$33,827, though a majority of small farms receive net incomes far below that amount. In fact, only 1 million farms nationwide (about half) show positive net cash income from farm operations and thus all

other farms depend on non-farm income to cover farm expenses. About 65% of farmers now hold some off-farm job (USDA 2007). The recently released 2007 Census of Agriculture documents many of the trends in food production that we see today. While the results show some figures that are disheartening, there are many that offer hope. Nearly 300,000 new farms have begun operation since the last Census of Agriculture in 2002. The census summary notes that “compared to all farms nationwide, these new farms tend to have more diversified production, fewer acres, lower sales and younger operators.” The demographics of farm operators have also become more diverse during this time, with a particularly significant increase of 30% for women farm operators (USDA 2007).

However, while the census shows an increase in small farms, it also shows an increase in very large farms. Concentration in agriculture has increased in the last five years, with fewer farms producing more of the total U.S. agricultural goods. Additionally, while the age of farmers on new farms is decreasing, the average age of farmers nationally is rising and is now at 57.1, up from 55.3 in 2002. This information is discouraging because very large farms and aging farmers have proven to be two particularly significant barriers to the reinvigoration of a sustainable and thriving agriculture in the United States. The entire Census reports on many more aspects of agriculture in the nation, though statistics on organic agriculture will not be released until December 2009.

The food system is experiencing issues of scarcity as well. With the state of the economy in 2009 many Americans are finding it hard to get by as food prices rise and food banks find it harder to meet the growing needs. In 2008 demand at food banks across the country increased by 30 percent from the previous year and many food banks have reported the last few years as their busiest on record (NY Times articles, From Handouts to How-To). In the United States we are also seeing increased rates of diabetes, heart disease, stroke, and cancer, all of which are chronic illnesses linked to diet (Pollan 2008).

Finally, we are perhaps more separate from our food than we have ever been. Most of us know very little about what we eat. All the time we see increasing numbers of people eating out or ordering in, fewer people cooking, and little knowledge about how to grow or prepare food. (Vileisis 2008). In the end, this disconnect at the basic level of the individual eater is what has allowed the industrial food system to continue on in spite of everything.

Emergent Alternatives – Defining the Foodshed

In response to the myriad of difficult environmental, social, and cultural challenges we face in the modern food system, individuals and communities world-wide have begun to respond with both conceptual and concrete alternatives, often based on the concept of the local economy. In the United States there has been enormous growth in the last decade in farmer's markets, food cooperatives, and Community-Supported Agriculture (CSA) programs (Vileisis 2008) There is a greater consciousness among farmers and consumers alike about the advantages of sustainable agriculture and the benefits of consuming local, organic foods. Collectively, these efforts are helping to create locally or regionally based food systems where a large percentage of participants are actively involved. In these smaller systems consumers, producers, and the land are "linked by the bonds of community as well as economy." (Kloppenburger et al. 1996)

The concept of a "foodshed" is one alternative that has emerged within the discourse on rebuilding our food system. A foodshed is similar to the concept of a watershed, which defines an area of land where all of the ground and surface water drain to the same larger body of water, typically a river or stream. John Wesley Powell, geographer and early champion of the watershed, defined the term in 1869 as:

...that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled simple logic demanded they become part of the community.

Correspondingly, a foodshed is a geographic area that supplies food to a particular population. While the foodshed is related to other, more well-known concepts within the alternative food movement such as food miles or the 100-mile diet, the foodshed binds humans, the landscape, and food in a particularly thoughtful way that offers great potential for the creation of a sustainable alternative. W.P.Hedden may have first coined the term in 1929 in his book, How Great Cities are Fed. In his definition of the term foodshed, Hedden acknowledged that our food system had already begun to ignore limits or processes that were defined by nature.

By analogy, we may conceive of the flow of foodstuffs to consuming markets as determined by foodsheds. The barriers which deflect raindrops into one river basin rather than into another are natural land elevations, while the barriers which guide and control movements of foodstuffs are more often economic than physical. (Hedden 1929)

Since 1929, the term foodshed has evolved to offer a framework for thinking about where our food is coming from, and how it is getting to use. In his article ‘Urban Foodsheds’, published in October of 1991, Arthur Getz posed these questions along with the hope that the term could be used to conceptualize how local and regional food supply systems work. Getz saw the foodshed as an appealing and useful idea because, similarly to a watershed, “it suggests the concept of a need to protect the source” (Getz 1992).

As the term watershed allows us to conceive of the essentiality of water in an area of land for the survival of everything within it, conceiving of foodsheds allows us to recognize the importance of a food supply within a specific area. The term watershed has long been championed for its utility “as an organizing framework for thought and action directed to understanding and implementing respectful and appropriate human interaction with particular pieces of land” (Kloppenburg et al. 1996). Similarly, a foodshed suggests the need to protect the land and resources in that area to provide food for the population within it and support the local ecology. Additionally, there is a need to understand the processes that create the foodshed and the condition and stability of

its processes in order to adequately protect and enhance it. Given the complexity and enormity of the modern food system, Getz contends that:

Our most rudimentary map of a foodshed might cover the globe, or resemble an octopus with long tentacles extending out from a large urban supermarket to remote tropical plantations, vast Midwestern grain acreage, and California's irrigated valleys of fruits and vegetables (Getz 1992).

The article 'Coming In To the Foodshed', published in 1996 by Jack Kloppenburg, Jr., John Hendrickson and G.W. Stevenson at the University of Wisconsin-Madison, offers a clear and thoughtful description of the term foodshed, using it as a framework for imaging alternatives that are based in local ecology and local culture (Kloppenburg et al. 1996). Kloppenburg et al. present the "global foodshed" that Getz offers as an oxymoron, insisting that foodsheds are "socially, economically, ethically, and physically embedded in particular places." While they have no fixed or determinate boundaries, proximity is a fundamental principle of the foodshed. A *local* foodshed is offered as an alternative to the global food system.

The authors also make reference to Hedden's definition of the foodshed, asserting that a foodshed ought to and can be shaped by ecological *and* cultural or economic boundaries, not just one or the other; that rivers of foodstuffs will stream into a particular area, mediated by forces of both "natural and social geography."

In her book Kitchen Literacy, author Ann Vileisis looks to history to understand how we lost knowledge of where our food comes from and the local food systems that allowed for such a deep understanding of our food in the past (Vileisis 2008). She begins by considering the foodshed of an eighteenth century American woman in Maine, Martha Ballard. Vileisis's description of Martha's foodshed, focusing on a meal of lamb, string beans, and bread, is useful in helping us to understand the highly visual component of the term.

[A foodshed] refers to the area of land from which food is drawn. I like to envision foodsheds from a maplike aerial perspective: the kitchen sits at the center and shaded lobes reach out across hills and swales of the landscape to encompass the areas that supply a

meal's ingredients. In the case of this meal, a long lobe would reach to Mr. Porter's farm ten miles to the west; a small lobe would reach two hundred feet south to the garden patch by the brook; and a lobe for bread would reach to the northwest where the Ballards' corn and wheat fields yielded their grains. (Vileisis 2008:15)

Throughout 'Coming Into the Foodshed', Kloppenburg et al. add new meaning to the term in a variety of ways. Here I will consider three key themes they elaborate on that are particularly original and useful. Firstly, the authors extend on Getz's notion of protection that a foodshed calls for. A significant problem within the global food system is that of "ethical distancing" or the ignorance of negative impacts. A large percentage of people who consume food in the United States do not know the land where their food was produced or the people who produced it, nor are they directly or apparently affected by negative impacts of producing that food. With distancing, the quality of human or ecological health is largely ignored.

In stark contrast, a local foodshed compels an extensive knowledge of the production and transport of food. While the authors recognize that a local foodshed will not be entirely self-sufficient, suggesting the ability to be isolated and supply all of its needs, they advocate for self-reliance, which implies a reduction of dependence on other places, but does not deny the desirability or need for external trade relationships. This proximate self-reliance provides for the sort of source protection that Getz mentions.

A community which depends upon its human neighbors, neighboring lands, and native species to supply the majority of its needs must ensure that the social and natural resources it utilizes to supply those needs remains healthy. A consequence of proximate self-reliance is that social welfare, soil and water conservation, and energy efficiency become issues of immediate practical concern ...In the foodshed, collective responsibility for stewardship of people and of the land becomes a necessity rather than an optional virtue. (Kloppenburg et al. 1996)

A second significant theme that the authors discuss is the role of nature and the landscape within the foodshed. As a local foodshed necessitates protection of local resources, it also requires an understanding of local ecology, which would be taken "not as an obstacle to be overcome but as a measure of limits to be respected." A foodshed must be based on that local ecology. Nature must

be viewed as teacher – as a part of the community, as an exemplar of the possible, and as an almanac of potential models for human conduct - and residents are compelled to pay close attention to details such as climate and season, native plants, and soil quality.

Including the natural landscape in the foodshed consequently allows humans to form a deeper relationship to the ecology of the place. In efforts to protect the land and local resources, residents will also come to know the ecology of the place and their connection to the locality and notions of responsibility can become more profound and layered.

A final important theme that Kloppenburg et al. discuss is the value of the foodshed in providing a frame for analysis as well as thought. While foodshed is a rich and evocative metaphor, the authors identify the practicality of the term and the “bridge from thinking to doing” as its most attractive attribute. The foodshed is both a place to visualize alternatives as well as organize and put those alternatives into place. In practice, the foodshed can act as a framework or loose set of borders for the creation of community food practices such as food cooperatives, community gardens, or community-supported agriculture programs.

While the focus of a foodshed is to provide local and healthy food to its residents, the reaches of the concept are much broader. Taken as a whole, local foodsheds are empowering to those who participate in them and work to promote values of community, comprehension transparency, local security, and ecological health and knowledge. Foodsheds necessitate community participation and interactions, as neighbors grow each others vegetables, preserve each others fruits, and bake each other bread. Ultimately, living and eating within a foodshed allows for the possibility of human life and the environment to be enhanced by human action. [tightening]

Foodshed Analysis

Kloppenburg et al. discuss various types of foodshed analysis as mediums through which to visualize and create successful foodsheds. They articulate as the main goals of such analysis an effort to focus on people and communities, solutions rather than problems, and the local or regional rather than national or international. Foodshed analysis should work to address the fact that farmers, consumers, and local communities are not simply victims but powerful agents capable of resistance and regeneration. Thus, foodshed analysis should work to identify and celebrate the successful and emergent alternatives to the global food system. Generally this will identify actions that are carried out on a small scale by specific communities. In making these alternatives known, individuals all over can begin to visualize the options that they have in their communities.

Kloppenburg et al. acknowledge that since the foodshed is not a determinate thing, and will rightly be different in every unique location, foodshed analysis will take many different forms. They also suggest that it is critical to understand the global food system to engage in meaningful foodshed analysis and to understand the constraints it imposes and identify the space it permits for alternatives. However, the authors maintain that foodshed analysis should be proactive and solution-oriented. A central goal is to identify, within a specific community or land area, the amount of food that is produced or could be produced, how that food is distributed, and the mechanisms and values by which all of that is made possible.

A Historical Foodshed Analysis

In this project, I have chosen to undertake a unique sort of foodshed analysis. The following chapters present an historical foodshed analysis of Claremont, California, with the intention of more fully understanding the path we took to reach the modern food system that exists here today. I will describe and analyze the food that was gathered, hunted or produced in or nearby Claremont and the

human communities that engaged in and were shaped by those practices. While history as written is never a complete depiction of history as lived, I have tried to use a wide variety of sources to paint a more accurate picture of the past. The information contained in the project has mainly come from secondary sources, including history anthologies that present the voices of many authors, and a great collection of primary source documents in the Special Collections of the Claremont Colleges Library.

The history as I tell it is broken up into three chapters, the first beginning with a discussion of the Native Gabrielino who first lived on the land. The Gabrielino subsisted directly off the land using a variety of hunting and gathering strategies. Although modifications to the landscape were made, the Gabrielino were intently aware that they had a duty to respect and care for the natural world that cared for them. The character of this foodshed differs most from the Claremont we know today but may offer the most insight into this landscape the relationship to food people might have on it.

In the second chapter I tell the story of the Spanish missionaries in California and the set of social and agricultural practices they brought with them that would forever alter land use patterns and food production in California. The Gabrielino world was rapidly and drastically altered by Mission San Gabriel, the focus of this chapter, which lay about 25 miles from present-day Claremont and was a particularly productive mission that greatly influenced the region.

The third chapter leads us out of the mission period and into the American period, through the development of the town of Claremont beginning at the end of the 19th century. The chapter focuses on the homestead practices of the early settlers and the growth and decline of the citrus industry, the backbone of the Claremont and Southern California economies for the first half of 20th century.

I hope that the stories and experiences of the people who lived here in the past will be as interesting and inspiring to the reader as they have been to me. In Kitchen Literacy, Vileisis elaborates on the role that history can play in teaching us about our modern food system.

In an age when farms and factories of food production seem impossibly remote from our dinner plates, history can sharpen our outlook with its perspectives and ironies, and remind us of the opportunity for change. (Vileisis, pg. 11)

In the final chapter, I will consider the three foodsheds together and the lessons that they can offer us. The three different time periods reveal drastically different methods for producing food on the landscape in and around Claremont. However, many common themes related to food and production are interwoven throughout the history and I will shed light on these throughout this final discussion. In particular, I hope to illuminate the multitude of ways in which this landscape has been edible. In doing so, I aim to reveal possible alternatives to the way we eat and interact with the landscape today. By focusing on historical foodsheds, we can begin to envision how we might create a contemporary local foodshed in Claremont.

The story of Claremont offers insight into the agency that communities have to create their own food systems, and the ability they have to make them locally based and healthy for residents and the environment. Ultimately, though we use this landscape in a much different way than the Gabrieleno, Spanish Missionaries, early Claremont settlers or citrus growers, we live in the same location and have the same fundamental needs. Our modern food system has proven to be an unsustainable and destructive way to meet those needs. Our predecessors can offer us wisdom on better ways to do so.

A main goal in all of this is to allow the reader to see food as more powerful than many normally think of it – as something personal, political, and ecological – and to understand that food systems (the ways in which we produce, transport, and consume food) have the power to shape the landscape, communities, and human lifestyles in profound and critical ways. In comparing three

radically different eras of food, I also hope to demystify some of the stereotypes and imposed hierarchies that exist around food and food production.

All of this work has allowed me, and hopefully will allow the reader, to come to know the landscape, culture, and story of this place a little bit better, and to do so through food. In the final chapter I will also discuss the food system in Claremont today and the potential that exists for creating a local foodshed, in order to present information that will be immediately applicable and an image of where we stand in the present. My assertion, and my inspiration in doing this research, is that we already have the historical inheritance and much in place in the present to work towards the goal of a local foodshed. The question is whether or not such a local system is valued and if we will choose to promote it. Wendell Berry, farmer and author, writes of this predicament:

Such a [local] economy is technically possible, there can be no doubt of that; we have the necessary methods and equipment. The capacity of nature to accommodate, and even to cooperate in, such an economy is also undoubtable; we have the necessary historical examples from many parts of the world. The surviving or remembered Indian agricultures of North America are instructive; so are surviving white American traditional practices such as those of the Amish. And proven new ways are coming into use. This is not, from nature's point of view, a pipe dream. What is doubtful, or at least unproven, is the capacity of modern humans to choose, make, and maintain such an economy. The urgent point is that... [i]t won't happen if a lot of people--consumers and producers, city people and country people, conservationists and land users--don't get together deliberately to make it happen (Berry 2002).

Chapter 1

Native Gardeners of Southern California: Gabrielino Subsistence Practices

The fall months in Southern California arrive with an abundance of acorns hanging heavy from large oak trees and scattered across the earth floor. In the fall of 2008 the acorns sit largely unutilized, crushed under car wheels and foot traffic, eaten only by worms, squirrels and other small animals. In past centuries when this land was occupied by its native inhabitants, the acorns served as a vital food source, so much so that they significantly helped to define Native American culture and subsistence patterns for the inland communities of Southern California and many other parts of the state.

Throughout the study of California prehistory, views on the hunter-gatherer lifestyle have varied greatly. In the present day, it is most commonly held true that hunter-gatherers, or foragers, maintained clever, highly effective adaptations to their ecosystems and were more intimately connected to the natural world than most citizens of modern, industrialized states (Raab and Jones 2004). Foraging often exists at the bottom of a hierarchy with agriculture, or as a primitive starting point of the evolution towards civilization. However, this chapter offers evidence of the ingenuity and sustainability of foraging in California and the careful landscape management involved in these practices. In order to understand and find value in the subsistence patterns of the Native populations that once lived in Southern California, I hope to show foraging as highly successful in its own right, measured in terms of sustainable use of and cultural adaptations to host ecosystems (Raab and Jones 2004).

Although the date of the earliest local occupation by Native Americans remains uncertain, settlement of California may have begun as early as the end of the last ice age around 12,000 to 13,000 years ago. According to historian William McCawley, the native group known as the

Gabrielino was likely present in Southern California by 6,000 B.C. This group, also commonly referred to as the Tongva, is indigenous to most of present-day Los Angeles and Orange counties as well as the Southern Channel Islands including San Clemente, Santa Catalina, and San Nicolas (McCawley 1996).

The great traverses of the San Gabriel and San Bernardino mountains helped define the borders of the Gabrielino territory (figures will be included). The mainland territory of the Gabrielino covered an area greater than 1,500 square miles and consisted of a lengthy coastal plain and several broad inland valleys, including the San Gabriel Valley where present-day Claremont lies. This area is also known as the Los Angeles Basin. Claremont is located at the base of the San Gabriel Mountains at the northwestern edge of Los Angeles County.

A great diversity of natural resources was available to the Gabrielino in large part due to the hospitable climate and wide range of habitats or biotic zones existing within their territory. Southern California exhibits classic Mediterranean-climate conditions, characterized by mild, wet winters and dry summers. The region also contains a diverse topography of coastline, plains, deserts, foothills, and mountains that has resulted from a dynamic geologic history. In the formation of this landscape a wide variety of rock types have been exposed, which in turn have produced a wide variety of soil conditions. The Mediterranean climate combined with this varied topography, diversity of soils, and dynamic fire cycles has produced a plant diversity that exceeds that of any other part of California or the continental United States (Rundell 2005).

By 3,000 B.C., a sophisticated food economy had evolved in the areas around present-day Claremont, which included both the gathering of plant foods and hunting (McCawley 1996). This is characteristic of the Gabrielino, who lived a hunter-gatherer lifestyle and also engaged in extensive trade between island and mainland communities as well as neighboring groups. The Gabrielino economy was rooted in an abundance of natural resources and the careful management of food

resources. While these inland groups lacked regular access to marine foods, an important source of nutrition for island and coastal Gabrielino communities, they had available to them a wide variety of edible plants and land mammals.

Inland Gabrielino communities usually occupied permanent geographical territories or usage areas that probably averaged about thirty square miles. Each community maintained a primary settlement within its territory as well as a variety of hunting and gathering areas, ritual sites, and other special use locations (McCawley 1996). It was common to find these settlements in areas where two or more biotic zones intersected, locations that provided a great abundance and diversity of natural resources and thus higher levels of food security.

The discussion of native subsistence patterns in this chapter will focus on the likely techniques of the Gabrielino who may have lived in or around Claremont, to establish the ways in which this landscape rendered edible for its native inhabitants. Although many of the accounts of Gabrielino subsistence patterns come from the early explorers and settlers of Southern California, this chapter is meant to explore, based on archaeology and historical accounts, the hunter-gatherer strategies likely used by the Gabrielino before the arrival of Europeans in the 16th century, a presence that greatly impacted Native American culture and subsistence. As we reconsider our present-day food system in the same location centuries later, studies of the Gabrielino offer a view into a radically different system of food resource management as their food practices played a large role in determining their use of and relationship to the land.

A Subsistence Culture Rooted in Geography and Landscape

Claremont is located in the foothills of the San Gabriel Mountains, around an intersection of three distinct biotic zones including coastal sage scrub, chaparral, and oak woodland. The chaparral zones within or near the Claremont area are mainly found in the foothills and upper canyons and are made up of dense, evergreen shrubbery (Rundell 2005). The main food resources available in this zone included deer and scrub oak, whose acorns were consumed when more desirable varieties of oak were not producing. **Scrub oaks** are in fact deeply rooted shrubs usually ranging from three to twelve feet in height, producing acorns similar to larger oaks, though often smaller in size and less consistently.

Sage scrub may be the most prominent or widespread biotic zone in the present-day Claremont area, composed of low drought-deciduous shrubs and cacti. While chaparral zones tend to average about four to eight feet in height, the typical height of shrubs in sage scrub zones is only three to four feet. Additionally, drought-deciduous plants lose their leaves during the summer months at the onset of drought conditions, compared to chaparral shrubs that keep their leaves virtually all year round (Rundell 2005). The major food resources offered by the coastal sage scrub zone included a variety of edible seeds, leaves, and fruit, **prickly pear cactus**, and small mammals (McCawley 1996).

The third major biotic zone found around the area of Claremont is the oak woodland. This includes mostly closed-canopy woodlands of evergreen oaks, allowing relatively little plant growth beneath the canopy. However, it is also common to find oak woodlands merged with mixed chaparral that grow mainly in light gaps of the canopy. In supplying the Gabrielino communities with acorns, a major staple of their diet, this biotic zone may have been valued as the most important. It was also likely the most seasonally used biotic zone, due to the fact that acorns only mature during the fall months of the year.

Gabrielino communities that lived in or around the present-day Claremont area may have also gone farther up into the San Gabriel Mountains for their food supply. Here they might have found **acorns, piñon nuts, and sages**, as well as deer and smaller mammals. It is likely that these communities hunted and gathered in the lower canyons during spring and summer, moving into the higher elevations in the summer and fall to harvest acorns (McCawley 1996). Differences in the three main biotic zones emphasize the importance of finding permanent settlements near a variety of biotic zones. Different zones were used more often than others depending on the season and the three zones together provided a large and generally dependable variety of food resources.

The Acorn Economy

A large part of what allowed the Gabrielino to minimally manipulate their environment and subsist in permanent settlements without the development of agriculture was the wide availability of wild edible animal and plant foods, particularly acorns. The landscape of the Los Angeles basin was able to provide enough food to effectively substitute agriculture. The abundance of food resources is revealed by the fact that Native California was more densely populated than any area of equal size in North America (Anderson et. al 1998).

In the Owens Valley area and along the lower Colorado River, there is growing evidence that Native Americans may have practiced irrigated agriculture, similarly to many other groups in North America who engaged in farming practices (Hundley 2001). Nonetheless, in California the majority of groups were likely hunter-gatherers that engaged in “acorn agriculture” (Raab and Jones 2004). The long, dry summers may have precluded the successful introduction of crops such as corn so that the abundant seasonal acorn crop served as a fitting substitute (Johnston 1962). It is also thought that knowledge of the tannin leaching process, necessary to make the acorns edible, may have spread so rapidly through California due to the necessity of rendering the acorns edible in the

absence of agricultural development (Gifford 1951). In most locations in California where native populations relied on acorns, it appears that the average annual production of acorns exceeded subsistence demands (Basgall 2004).

The Gabrielino offer a particularly exceptional case study of hunter-gatherer societies due to their use of acorns as a primary food source. Throughout the Gabrielino territory, and most of prehistoric California, there existed a strong correlation between oak productivity and population density (Basgall 2004). It is believed that up to half of the Gabrielino diet may have consisted of this staple (2). While the acorn is seasonally available in great abundance, it contains high levels of tannins which when eaten raw, make the acorns very bitter. The tannins are removed through a leaching process, and though it is unknown when this process first came into practice, it is clear that it caused the use of acorns to spread rapidly. Though many different leaching practices may have been used, the Gabrielino are thought to have used a basket leacher to remove the tannins from pulverized acorns (Gifford 1951).

Due to their seasonality and storability, acorns functioned similarly to cultivated crops in many ways. Whole communities would participate in harvests during the fall months. Men would climb into the oak trees and shake them while women and children collected the acorns from the ground. Acorns were easily stored within dwelling units or outdoors in large, raised baskets. With protection from moisture and pests, the acorns could be stored for long periods of time and would be processed and consumed throughout the year. Although labor input for the harvesting and processing of acorns is not well measured and accounts are scattered, it is likely that this was a very labor-intensive process and the busiest time of the year for the Gabrielino (Basgall 2004).

The nutritional content of the acorn is high, though there is some level of variance across different species of oak, fifteen of which are present in California. In general, compared with wheat and barley, acorns are superior in fats, comparable in carbohydrates, and inferior in protein. Due to

the high fat content, acorns are superior to most grains in terms of total number of calories (Basgall 2004).

Additional Edibles – Wild Plant and Animal Species

While acorns remain the most prominent plant food in the Gabrielino diet, other foods factored significantly in providing additional nutrition. Edible plant foods formed another major component of the Gabrielino diet. These included leaves, shoots, roots and bulbs, fruits seeds, and nuts. It is unknown how many plant species the Gabrielino used for consumption but the number was likely as high as 200 (McCawley 1996). A more extensive list is included in Figure 1 below but discussed here are some of the most widely used and important plant foods among the inland communities. The wide range of foods that the Gabrielino chose to include in their diet aided them a great deal.

The root of the wild hyacinth may have been the most widely used plant. Other important plant foods may have included chía, tender shoots of wild sages, piñon nuts, milkweed, wild oats, clover, and wild sunflower seeds. Although there is some debate about the use of agave, mesquite, and yucca among the Gabrielino, these plants are common in the area and served as food resources for neighboring groups and were likely used by the Gabrielino (McCawley 1996, Johnston 1962). Additionally, among the words in the Gabrielino language that have been documented are multiple terms for different yucca plants, suggesting their importance (3).

The Gabrielino used wild fruits in a variety of ways. One important fruit was the Islay or the hollyleaf cherry, which was generally harvested, dried and then ground into meal. A similar process was also used for pits of wild plums. Native fruits were more useful in this respect than for their pulp, which was often very sour and dry (Johnston 1962). The dry climate did not encourage the growth of berries, but some varieties of currants and gooseberries could be found close to water

sources (Nyerges 1997). The fruit of the prickly pear cactus, after being carefully harvested with tongs and removing the spines, was consumed widely (Johnston 1962).

Other staples of the Gabrielino diet included animal meat and a wide range of edible seeds and plants. Food responsibilities were generally divided on the basis of sex and age, with men carrying out most of the fishing and hunting and women gathering plants, roots, seeds, and nuts. It is thought that women almost exclusively were in charge of the processing of acorns and the management of acorn storage (Jackson 2004). Children and elders would sometimes help the women in everyday gathering and in particular helped during acorn harvest periods (McCawley 1996).

Gabrielino men were practical and skilled hunters. It is likely that every small and large animal that roamed the plains and foothills was hunted or trapped, perhaps excepting the bear and a few other animals that were considered taboo to consume for spiritual and other reasons (Johnston 1962). Large animals such as deer or coyote were hunted using a bow and arrow. A variety of methods were used to capture smaller game and birds, including deadfalls, snares, traps, nets, slings, and throwing clubs. Some burrowing animals such as rats were smoked from their nests and then clubbed and rabbits were often driven into large nets using fire. Deadfalls, which probably involved some sort of trap causing a stone to crush the prey, were commonly used for squirrels and other rodents (McCawley 1996).

Insects were also an important part of the Gabrielino diet and often served as a quick form of subsistence for men and women on hunting and gathering expeditions. Insects common in the Gabrielino diet may have included locusts, grasshoppers, white grubs, termite, maggots, and the larvae of yellow jackets, bees, wasps, ants, and beetles. Insects were usually eaten raw (McCawley 1996).

Although marine foods played a large role in the diet of some Gabrielino communities, it was a less significant food resource for inland communities who did not have consistent access to the ocean. Coastal and island communities in comparison, had at their supply a wide selection of food resources including many varieties of tuna, sea bass, rock fish, sardines, halibut, shellfish, and larger sea animals such as sharks and sea otters (2). While the Gabrielino communities around present-day Claremont probably did not often engage in fishing activities, ample trade with coastal and island communities as well as neighboring Native American groups supplied them with marine food resources to add to their diet.

Food Security: Regional Trade Networks in Native California

The Gabrielino culture and economy were also highly dependent on trade and ritual exchange between coastal and island communities and with neighboring groups. The Gabrielino homeland lay at the center of an extensive network of trade associations through which many foodstuffs and other material goods were exchanged. Trade within and among Native American groups helped to distribute food resources more evenly, promoted population growth, and reduced the occurrence of food shortages.

Within the Gabrielino territory, there was extensive trade between mainland and island communities. The communities of the interior valleys in particular relied on coastal and island communities to provide them with marine food resources in the winter and spring months when their supply of plant foods was less abundant. These months may have been very hard for the Gabrielino and they were very dependent on trade at this time for a variety in subsistence (Basgall 2004). The inland communities may have in turn provided plant foods or other manufactured goods. Trade likely played a significant role in the establishment of permanent settlements with less

reliable food supplies. Trade also helped the Gabrielino form strong relationships with neighboring groups. This was true particularly with the Chumash to the north (McCawley 1996).

Trade was extremely important to the Gabrielino subsistence strategy because it meant that they were not always completely dependent on their immediate natural environment for food resources. In the case of inclement weather or a bad hunt, trade provided the Gabrielino with an important source of food security. Additionally, it helped bring diversity to their diet and form relationships with people outside of their permanent settlement. It is thought that they were generally a happy, peaceful, and democratic people that were not often overworked though capable of prolonged, directed effort whenever necessary such as during acorn harvests. Although hunter-gather groups in California engaged in some feuds, most of their energy was put into subsistence. (Hundley 2001) The combination of abundant natural resources and strong, mutually beneficial trade relationships are thought to have played a large role in making this characterization possible (Johnston 1962).

Sustainability of Native Foodways

The Native Californians were not simply *in* California; they *were* California. They were an integral and essential agent in the creation of a balance of land, vegetation, and animal life... By listening to the land's daily rhythms, scheduling activities according to its seasonal cycles, and always adjusting to California's continually changing environment, Native Americans transformed their status from newcomer to native and in doing so transformed the land and lifeforms as well. California was not "wild"... Using nature sustainably, Indians inhabited that middle ground between wilderness and the domesticated garden. (Anderson 1998)

The Gabrielino lifestyle was rooted in the effective and sustainable utilization of available food resources. Acorns were harvested carefully so as to avoid damaging the oak trees that provided their main staple (Hundley 2001). One common practice that was used to increase the yield of a number of wild plant foods was the burning of large areas of grassland. Many important plants in

the Gabrielino diet such as chía, clover, and certain grasses and bulbs thrive in fields that had been previously burned (McCawley 1996). This practice mimicked the natural fire cycles that sweep through Southern California, effectively precluding the intermittent fires that devastate large areas of California today (Anderson et al 1998).

In all means of tending the land, the Gabrielino worked in ways that generally mimicked nature – similar to changes caused by floods, fires, gopher activity, or tree windfalls. While deliberate burning was the major management tool used to shape the landscape of Southern California, a host of other horticultural methods – weeding, pruning, sowing, selective harvesting, and tilling – were likely used by the Gabrielino, influencing the landscape in more subtle but profound dimensions (Anderson et al 1998). Similar to modern day farms or orchards, gathering sites were subjected to the same competitors, namely insects, diseases, and weeds. Human management of these sites kept competitors in check and stimulated qualities, such as ideal conditions for certain edible plant species, that were culturally valued (Anderson et al 1998).

Gathering sites often had very old usage and were places in which, by coming to know them, understanding – of the landscape, ecology, and community history - slowly accumulated through the lifetime of individuals and throughout generations.

Gathering in a place where your grandmother, great-grandmother, and great-great grandmother had gone before showed deep respect for the old ways and was a poignant commentary on the sustainability of human harvesting practices. Knowledge of the natural history of places grew out of watching those places for hours, days, years, lifetimes and generations. A gatherer, hunter, or fisherman carries the inherited memory of an ancient, organic, incalculably valuable body of knowledge that was passed down, added to, and then passed again through many generations of elders. (Anderson et al 2000: 18)

The Gabrielino and other Native Americans throughout California successfully and skillfully gathered plants at various sites in their respective territories without depleting species populations to points of extinction. M. Kat Anderson, historian of native California and plant

ecologist, describes the sustainability of these techniques with clarity (Anderson et al 1998, Anderson Before the Wilderness).

Plants were gathered with regard to at least six variables: season, frequency, appropriate tool, pattern, scale, intensity. If plants were gathered too often, or at an inappropriate season, or at an extreme intensity without sparing individual plants, the population could easily be extinguished, even with low levels of technology. For example, natives gathered edible mushrooms while being careful not to disturb the soil mycelia in order to ensure future production; basketry shrubs were pruned in the late fall or winter during the dormant period, when such disturbance is least detrimental to the plants' vital processes (Anderson et al 1998: 33).

At times, however, the intense intervention non-human processes resulted in depletion of important resources, particularly larger animals. By the time 16th century, many of the larger hunted animals were constrained spatially and demographically by the subsistence requirements of the native dwellers. While large game animals survived, they did so as marginal components of the landscape and human diet (Hackel 2005). However, unlike the disruptive consequences that were to come in the colonial period, these depletions were not greatly erosive to overall environmental health and the resource base remained largely intact (Hackel 2005, Anderson Before the Wilderness)

An analysis of the Gabrielino culture shows that the local environment and food resources profoundly shaped many of their values and beliefs. Many annual ceremonies and celebrations significant to community welfare and harmony were focused on the changes in the seasons or harvest periods (McCawley 1996). In his discussion of the Gabrielino culture, Miller (1991) wrote that "environment as a cultural factor should not be overlooked. Climate, geography, flora, fauna, and available water all directly relate to the way in which the Gabrielino lived and the manner in which they believed... a mild climate and relatively abundant food supply supported unity and permanence of cultural patterns and values." (2)

Specific practices and behaviors also reveal a profound concern for proper management of food resources. In general, two overarching tenets that dictated Native America resource use were

“do not waste resources” and “do not hoard resources” (Anderson et al 1998). Throughout Gabrielino oral traditions greediness, gluttony, and food hoarding are all depicted as reprehensible traits. A portion of food from each day’s hunting or gathering was deposited in a communal reserve in addition to being placed in individual family reserves. Various rituals and high levels of self-discipline were employed by men during hunts to ensure success and they were widely discouraged from eating during a hunt or even partaking in what they had killed upon return. This component of hunting may have stemmed from an idea that “whoever ate of his own game hurt his hunting abilities” (McCawley 1996), though it also probably helped to establish a culture that discouraged those traits of greediness and gluttony and encouraged respect for food resources.

The concept of unity in Gabrielino culture may stem in part from a unity in subsistence techniques, an idea that A.L. Kroeber discusses in his chapter on food patterns in *The California Indians: A Source Book*. Kroeber claims that for the most part, the practices of California Native American groups were distinguished by patience, simplicity, and a “crude adaptability”; that with some modification, each process could be successfully utilized on some other group of foods. Few subsistence techniques called for an individual with high skill levels or extensive experience for successful application (Kroeber 1951). The unity of these subsistence techniques due to the general accessibility and abundance of food resources may have helped the Gabrielino to form a clear relationship with their natural world and encourage a unity of values based in care for the environment and food resources.

The everyday engagement in obtaining, managing, and preparing subsistence produced a Gabrielino culture with abundant knowledge and care for their natural environment and food resources. Although trade allowed some independence from their immediate natural environment, there was a great sensitivity to the delicate balances in nature and an understanding of the importance of creating harmonious relationships with nature. As the Gabrielino built permanent

settlements and hunted or gathered food, a deep respect for nature allowed them to make conscious, undistruptive manipulations of the land. Native American groups in California widely recognized that adverse interference with ecosystem relationships “threatened their own existence as well as the natural world on which they depended and of which they were an integral part.” (Hundley 2001: 4).

Chapter 2

The Spanish and Mexican Periods: Ecological and Cultural Change and the Intensification of Food Production

Long before European colonization, the Gabrielino and other Native American groups of California had begun to shape the natural world to their advantage through burning, pruning, weeding, and seed dispersal. While many suggest that the aboriginal environment was pristine or fully wild, the landscape had in fact been modified by human influence for centuries largely to obtain adequate subsistence from the native flora and fauna species. The impacts, however, were much smaller in scale and shorter in term than the transformation that resulted from the land-use practices of the first European settlers.

In September of 1542 the expedition of Juan Rodriguez Cabrillo landed in what is today San Diego Bay and marked the first date of European contact in Alta California. The California natives responded with mixed reactions; many were initially hostile or fearful of the explorers, but after some time welcomed them (Simmons 1998). Other native groups, such as the Chumash, who resided north of the Gabrielino territory, were immediately interested in trade. Many Native Americans would, centuries later, again view the European settlers with hostility in response to their drastic manipulations of the environment and other repressive behaviors. It was not until over two centuries later in 1769 that the Spanish came to fully settle in the land then know as Alta California, spanning the distance from present day San Diego to San Francisco (map of Alta California to be included, Fig 1 – pg 51 in Hackel 2005).

Departing strongly from the Native American view of nature in prehistoric California, the Spanish held the view that nature should be highly controlled and existed to serve humanity; “among the most persistent of [their] attitudes was [the] conviction that nature – rivers and streams, woodlands, minerals, soils, deserts, animal and plant life in all their complexity – constituted a

divine gift to be subdued and exploited in the name of God and civilization” (Hundley 2001:28).

The forceful manipulations of the land, water, subsistence techniques, and controlling views toward the environment during the Spanish and Mexican periods in California, lasting from 1769 until 1846, had far reaching and long lasting impacts that are still felt today. In particular, the colonial agricultural legacy would strongly influence the future of agricultural and hydrologic endeavors in California and drastically alter the landscape and culture of the region. Although only a small portion of California was modified by colonial agricultural practices when it officially gained its statehood in 1850, a process had begun that would ultimately and permanently modify enormous portions of the state (Preston 1998).

The Mission Institution

The Spanish occupation of California from 1769 until 1823 took the form of three main institutions – the mission, the presidio, and the pueblo. Socially, the missions served primarily as religious sites for the conversion of Native Americans to the Catholic religion, whereas the presidio and pueblo were military and civilian communities, respectively. Throughout Alta California a chain of twenty-one Franciscan missions, four presidios, and three pueblos was established. All of Alta California was then divided into four presidial districts, each of which contained between five and eight settlements. The first Mission was established at San Diego in 1769 and the founding of Mission San Gabriel followed soon after in 1771, the influence of which extended into much of the present-day Los Angeles Basin, including the towns of Claremont and Pomona and the City of Los Angeles. Mission San Gabriel was included in the southern-most presidial district, which was known as San Diego (Costello et al. 1989).

The presence of water and arable land determined the location of most of the Spanish settlements. The depiction by Missionary Francisco Palóu, reporting on an exploration of the land in

the Gabrielino territory, helped to prompt the founding of Mission San Gabriel, which was later to become one of the most productive missions in Alta California. He described the area as having “good streams of water”, “fertile land”, “cottonwoods, willows, and other trees, thickets of blackberries, and innumerable wild grape vines” (Hundley 2001:34).

The physical layout of most missions was similar, including a central courtyard, living quarters, a church and cemetery, as well as agricultural land, livestock grazing areas and complex irrigation systems to bring water to the missions (Fig 2 – to include drawing of typical mission layout, from Castillo et al. 1989 pg 312). Although the Spanish settlers sought out sites that were close to water sources, the implementation of aqueduct systems of dams, ditches, flumes, and reservoirs marked a shift departure from the Native American relationship to water. Whereas Native Americans went to the water, as they needed it, the Spanish brought water to their settlements for agricultural fields, extensive and decorative gardens, mission residences, and industrial activity areas such as potter’s shops and gristmills (Costello 1989). The Spanish were highly dependent on these waterworks to sustain their systems of agriculture and livestock, all of which was dependent on native workers. In beginning this change from indigenous food systems and water use, the Spanish initiated a hydraulic revolution that ultimately, more than any other agency, would transform the natural world in California (Preston 1998).

The Development of Agriculture

In the first years of Spanish settlement soldiers, settlers, and padres depended mainly on supplies imported from Mexico, including foodstuffs such as rice, beans, wheat, biscuits, ham, sugar, corn, wine, and brandy (Hackel 1998). However, the shipments were largely unreliable and colonists often waited long amounts of time for ships to appear or found that the ships arrived with spoiled provisions. Thus, during the first few years of settlement the Spanish experienced regular

shortages of food and often relied on food reserves of local Native Americans for survival (Hackel 1998). It was clear early on that the Spanish would need to supply much of their food themselves, particularly if they wanted to attract new native recruits.

The Spanish colonists had come to California with the seeds and tools – hoes, plows, picks, and shovels - needed to transform the land and the native people on it (Hackel 2005). The mission fathers recognized early on that converting natives to Catholicism required a steady food supply. Father Junípero Serra of Mission San Carlos, wrote in a letter to another Mission father on the mission's progress: "With regard to crops nothing worthy of the name has as yet been achieved... as regards spiritual matters, much could have been accomplished if only there were something to eat" (Hackel 2005). The Spanish aimed to use food as a means of attracting Natives to Catholicism and simultaneously detaching them from indigenous society and customs.

In these first few years of trails the Spanish worked hard worked to articulate the structure of the Alta California economy and the missions began to emerge as productive agricultural enterprises. While the missions originally worked as subsistence-based operations, later in the Spanish occupation they would emerge as the backbone of the Alta California economy. In 1774 seeds of wheat, corn, and other grains and vegetables were sown at Mission San Gabriel and three other missions, all of which yielded abundant harvests and gave the colonies their first taste at self-sufficiency (Hackel 1998).

The Spanish colonists brought with them a taste for the domesticated crops of the Old World and values that encouraged control of the environment. Agriculture at the missions, and later in the pueblos, transplanted many traditional Spanish crops to California such as the orange, lemon, fig, date, olive trees, grape vines, and staple crops that had been grown in other parts of the pre-colonial Southwest such as corn, wheat, barley, and beans (Rolle 2003). In many ways, the Missions served as testing grounds for crops that have since played a vital role in California agriculture. In the

territory that Mission San Gabriel occupied, citrus and grapes have since played a huge role in the landscape and economy of the area. One of the earliest citrus groves was planted at Mission San Gabriel, setting the stage for the citriculture industry that would soon dominate the landscape in the late 19th and early 20th centuries.

By 1805, nineteen missions cultivated crops and the collective harvests of wheat, corn, barley, and beans totaled almost 60,000 fanegas¹ (Hackel 1998). The agricultural productivity of the missions increased over time, experiencing nearly a 30-fold increase in aggregate mission productivity during three decades. The increased success in productivity was in large part due to the increase in Indian laborers. This is where the intersection of the religious influence and environmental impact of the missions is most clear and perhaps most disastrous. As the missions became more established with time, the number of neophyte Indians (Indians who had recently been converted to Catholicism) grew as well, numbering nearly 20,000 by 1805 (Hackel 1998). With these large and stable populations the missions were able to fully establish their agricultural and irrigation systems, run almost entirely by Indian laborers. Ironically, and tragically the Spanish were completely dependent on these laborers to carry out the large-scale land-use changes that essentially destroyed the native landscape and lifeways. Once the Spanish forms of agriculture proved viable, the native subsistence methods quickly became less common and more difficult to practice.

The Pueblos of Alta California were initially established to reduce military dependence on the missions and initially were directed almost entirely towards providing the presidio populations with agricultural foodstuffs. Three pueblos were established between 1777 and 1797, including Los Angeles, established in 1781. As was the case in the missions, Indian laborers did much of the agricultural work. Although the agricultural production statistics for Los Angeles are scarce, it is clear that at times the pueblo produced impressive amounts of corn and often contributed to the

¹ 1 fanega = 1.575 bushels, about 101.5 lbs of corn or 82.4 lbs of wheat.

prevention of food shortfalls. By the mid 1830s, Los Angeles could count roughly 170 farms, orchards, gardens, and vineyards. Throughout the Mexican period and into the American era starting in 1846, Los Angeles retained its agricultural roots and remained largely a town of farmers (Robinson 1959).

Encouraging these efforts at self-sufficiency in Alta California was the Spanish crown, which, in the late 18th c., worked to reduce the expense of the overseas empire by ensuring that colonists could feed, clothe, and protect themselves with a minimum of royal support. By 1778, most of the Missions harvested enough agricultural foodstuffs to supply their own needs and although annual production at individual missions fluctuated, exchange of surpluses between missions alleviated local shortfalls in food (Hackel 1998).

Thus, although the forms and means of subsistence in colonial Alta California differed drastically from those of Native California, due to the lack of reliable shipments from other areas and the apparent abundance of fertile land the population relied similarly on the local landscape for subsistence. Like the Native Californians, who traded with coastal or island communities as well as neighboring tribes, the mission populations also received foodstuffs and gained security in their food supply from farther, regional sources in the case of food shortages. For the settlers of Alta California, the various missions, pueblos, and presidios up and down the coast provided security to one another in the case of food shortfalls. In this way, the economy at the time was still based largely in local and regional development.

Changing Methods of Subsistence: Cultural and Nutritional Impacts on Native Populations

As the Native populations of California shifted from food collecting to food production, their daily work routines were drastically altered. Studies of different living societies have shown

that the amount of work varies greatly with mode of subsistence. Foragers commonly require more land and accumulate smaller food surpluses, but only require modest input of hours to obtain sufficient food. Food producers or agriculturalists on the other hand, use smaller amounts of land more intensively to yield larger surpluses. However, they pay a tremendous price in increased labor hours spent in food production. Additionally, as the change from the native diet shows, the abundance of foods in this surplus may be based on a diet that is low in variety and is not nutritionally balanced (Hoover 1989).

While the Gabrielino and other Native Californians saw the intrinsic problems of manipulating the environment in such a forceful way as the Spanish colonists were doing, they also found it increasingly more difficult to lead their traditional lifestyles. Although the Gabrielino are thought to have continued some traditional subsistence practices during the mission period, steady expansion of agricultural land and the increase in livestock throughout Alta California, as well as the active suppression of prescribed burning, rendered the traditional Gabrielino lifestyle almost impossible and for many it became imperative to work full time for the settlers (Hackel 1998).

Evidence of open ground fires and traditional grinding instruments in Native American dwellings within the missions shows some continuation of the cooking traditions that were carried out before European contact. Additionally, neophyte Indians are thought to have engaged in trade with natives living outside the mission, crucial to the survival of both groups, the former living on a drastically changed diet and the latter finding their land encroached upon by mission expansion. Trade was also significant in maintaining social and economic bonds between Indians at and beyond the missions (Hackel 1995). However, the diet of the Native Americans at missions continued changed drastically and as time went on gradually fewer native foods, such as those described in the previous chapter, were consumed at the missions (Costello 1989). While Native Americans living outside the missions may have continued a traditional diet for longer, it is likely

that most of them gradually adopted the foods of the Spanish as it became more difficult to forage for native foods. Additionally, as the environment continued to change, Indians' numbers declined, largely from disease, and customs were altered, the trade connections between natives within and outside the missions were disrupted and dissolved, eliminating an important source of supplemental resources to both areas (Hackel 1995, Walker 1989).

Stephen Hackel, author and historian, writes extensively of the impacts of the mission system on native Californians. While the following quote refers specifically to Mission San Carlos in the Monterey region, similar events occurred around Mission San Gabriel and all of Alta California.

Just as European diseases radiated from Spanish centers of settlement into remote Indian villages in the years after 1770, so too did environmental degradation, as Spanish livestock invaded and then exhausted ecological niches farther and farther from the mission and presidio. Into this disturbed environment came a host of weeds and plants that the Europeans had inadvertently brought with them. These Old World plants had shown themselves adept at coexisting alongside European grazing animals elsewhere. They were hardier than native grasses and bushes and more suited to dry, compacted soil, and, as a result, they succeeded many indigenous food sources... [By 1800], nearly all the Indians [] labored for their primary subsistence in mission fields, not the surrounding countryside. The awful, if accidental, genius of Spanish colonization in California, then, was not just in creating a subsistence crisis among Indian communities through introduced diseases, plants, and animals; it was in offering what appeared to be a solution in the form of food Indians raised at the mission (Hackel 2005: 71 – 72).

For those Native Americans living at the missions, the diverse array of foods previously consumed in the native diet was replaced by monotonous diets mainly consisting of agricultural staples such as wheat, corn, and beans. Other foods in the mission diet included beef, mutton, pig, and vegetables and fruits when in season (Walker 1989). Marine resources factored little into the mission diet and thus the change in diet for inland communities may have been less drastic than coastal communities who had previously included marine resources as a primary form of subsistence.

Although Native Americans under the mission system generally received adequate amounts of food, the nutritional quality and diversity was highly inferior to their traditional diets. Meals often had high carbohydrate contents but were deficient in high-quality proteins, Vitamins A and C, and Riboflavin, which plays a key role in energy metabolism. Supplementing these diets with wild food became more difficult as agricultural production was made more efficient and widespread, covering more of the land that was previously foraged. As well, neophyte Indians who lived in the missions were gradually restricted from going out to hunt and gather food. More and more Native Americans began to work in their own vegetable gardens that were given to them by the missions (Hoover 1989).

Ushering in the Mexican Period and the Private Rancho:

Increased Livestock and Grazing Lands

In addition to cultivating agricultural lands, the Missions contained vast lands for livestock grazing. The first livestock were brought overland from Baja California to serve as transport and sustenance for settlers of Alta California but quickly multiplied and reached enormous populations. By the 1770s most missions had some population of livestock. While only 204 cattle arrived with the initial group from Baja California, by the 1840s their population numbered in the hundreds of thousands. Mission San Gabriel on its own had seventeen ranches for raising cattle and horses and fifteen ranches for sheep, goats, and pigs. When presented with grasslands containing vast amounts of food, the horses, cattle, and sheep multiplied rapidly and dispersed widely throughout the Alta California (Hackel 2005).

In the 1821 Mexico gained independence from Spain, subsequently gaining full power over Alta California. The number of livestock and lands devoted to grazing increased drastically

throughout the Mexican period until 1846. The missions were secularized in 1833 and in doing so, the great land holdings of the Spanish were up for grabs and patterns of land use and ownership rapidly changed. Through the Colonization Act of 1824 and the Secularization Act of 1833, the Mexican government created mechanisms through which private individuals could for the first time obtain title to land in California (Costello et al. 1989) Prime mission lands were opened up for pasturage and settlement. In doing so the Mexican government ushered in an enormous transfer of the principal economic resources in the region – land, livestock, and laborers – from the missionaries to the settlers.

A significant change that took place during the Mexican period, promoting great changes in land use, was the dispersal of Spain's restrictive mercantile policies. Although import and export taxes remained high, California was opened up to foreign trade. In the process of opening itself up to the rest of the world, and no longer focusing simply on local development, great and rapid economic transformation began in California (Hackel 1998). As food could now be imported from elsewhere, land use could be rapidly shifted towards pasture for livestock and land uses.

The privatization of land holdings in California occurred at a rapid, “dizzying” pace (Hackel 1998). By 1840 the private rancho had replaced the mission as the dominant economic and social institution in California, and by the end of the Mexican period about 10% of present-day California land had passed into private hands. This time also marked a dramatic shift away from the agricultural roots of the missions as livestock began to replace food crops (Costello 1989). Although rancho communities sometimes included fields, orchards, and vineyards on their lands, they were devoted primarily to cattle raising and the trade of hide and tallow, an industry in California that would also experience a boom period during this time.

Rancho boundaries in Mexican California were loosely defined by landmarks such as a hilltop, streambed, or clump of cacti (Rolle 2003). Although the boundaries of the estates were

rather vague, Claremont was included in the territory of Rancho San José, the development of which will be discussed further in the following chapter.

The transfer of lands to private hands during the Mexican period perhaps offered a final blow to the Native American populations, who had never viewed the land as something to be bought and sold but a part of the natural world to be utilized and cared for. Many Native Californians perceived the entire process of transformation in Alta California as an assault on the landscape and their spiritual well being. They were generally appalled by the massive environmental upheavals caused by agriculture and livestock grazing in this period, in addition to the hunting, mining, and logging that took place (Simmons 1998).

The Environmental Impacts of New World Species

The new species of domestic livestock and crops introduced from the Old World inadvertently brought with them pathogens, pests, and numerous invasive species. The combination of great numbers of livestock and intensive agriculture made for rapid environmental change in Alta California, particularly among the native plant communities. This change had a large impact on subsistence strategies as it displaced many of the edible species that the native populations had relied on for food. Environmental change was also accelerated as Native Americans became less influential in managing environments due to acculturation into mission life and large decreases in population, mainly due to death from disease and increasingly unsanitary conditions (Preston 1998).

Changes in the flora of Alta California were brought about mainly by overgrazing of the large numbers of livestock and the introduction of alien plant species (West 1989). The invasive species brought by the Spanish had evolved over longer periods of time in more extreme Mediterranean climates and thus were already suited to thrive in Alta California. Additionally, the majority of the invasive species had evolved mutually with domestic livestock in a pastoral setting

such as the one created in Alta California. Therefore, these plants proved to be more adaptive than many of the indigenous species that dominated the landscape prior to colonization. The spread of agriculture in general also led to the defining of some flora and fauna as “weeds” and “pests”, respectively. Certain native species that were once seen as a useful part of the ecosystem, and may have made up part of the native diet, were now viewed as threats to crops and livelihoods (Preston 1998).

The most significant changes appear to have taken place in the grasslands, where alien species now account for 50 – 90% of the plant cover (West 1989). While the composition of Southern California’s grasslands prior to colonization is not well documented, it is postulated that the vegetation consisted mainly of perennial bunch grasses, with needle grasses being dominant. After colonization, species of Old World annuals such as mustard, wild oats, ripgut, and filaree quickly became dominant (Preston 1998). It is also clear that the practice of burning the grasses that the Gabrielino and other groups carried out played a significant role in the composition and distribution of grassland formations. During the Spanish and Mexican periods, burning was essentially prohibited, further altering the landscape and accelerating the influence of invasive species (Anderson et al. 2000)

Although the ecology of the grasslands was impacted more significantly than any other biotic zone in Alta California, there were subtle but profound alterations in nearly every California habitat after the arrival of the Spanish. In his discussion of environmental change in colonial California, William Preston (1998: 273-274) notes the deep impact of the weakening relationship between humans and the environment.

[T]hese [environmental] changes were determined more by the destruction of Indian lifeways than the appearance of aggressive foreign species. The weakening of the natives’ function as keystone species, because of murder, disease, and relocation, was the catalyst for most habitat modification functions. The diverse mosaic of landscapes that had been structured and maintained by native practices, especially the use of fire, slowly and progressively adjusted to the Indians’ removal from the ecological equation. In general,

each major habitat responded by becoming more uniform in pattern and by losing some of the human-induced diversity.

The diverse landscape of the Gabrielino inland community around Claremont, straddling three distinct biotic zones, was likely altered in such a way. From the changes inflicted during the Spanish and Mexican periods, it becomes even clearer how the subsistence practices of the Gabrielino played an indispensable role in fostering health and diversity in the Southern California landscape.

The Legacy of the Spanish and Mexican Periods

What may stand out most about the Spanish and Mexican periods in California is the speed at which change occurred. In less than a century, a society of hunter-gatherers who over a period of thousands of years had holistically modified and slowly adapted to their natural environment was transformed into one of food producers who drastically altered the landscape with agricultural fields, livestock, and complex systems of irrigations. The colonization of California would drastically impact the ecology of the region, significantly altering patterns of vegetation, as well as the subsistence techniques and diet of the Native Americans.

Perhaps more significant was the change in culture and influence of European views towards the environment, causing the relationship between humans and nature in California to move from one of coexistence and respect to one of detachment and control. This colonial legacy seems to have proven resilient and lived on through the 19th and 20th centuries and into the present day, situating our relationships with the environment as ones of power and creating erosive, mono-cultural food systems that further enforce that mindset.

Chapter 3

The Town of Claremont:

The Transformation and Distancing of Food Production

The lands under control of Mission San Gabriel extended into the Pomona Valley, including the area of present day Claremont. However, non-natives did not settle the area until April of 1837. Soon after the missions were secularized and the land was privatized, Ygnacio Palomares and Ricardo Vejar, both originating from Mexico, were granted judicial possession of the land by the Governor of California in 1837. The land holding was known as Rancho San José. Palomares and Vejar quickly moved onto the land, bringing with them their families and livestock. They built homes and for planted corn, potatoes, beans, and peppers by small streams that ran across the landscape (Robinson 1939). Before this time the mission fathers had claimed jurisdiction over the area and often grazed sheep and cattle in the valley. It is likely that Gabrielino settlements dotted the land, composed mainly of those natives who had fled control of the missionaries (Wheeler 1983). The land still looked much the same way it had for the past centuries when only the Gabrielino lived in the valley.

The first house established in Claremont was an adobe building that the Mission fathers used as an experimental station for crops and livestock. The Ranchos remained primarily livestock operations, though over time began to incorporate more food crops (Robinson 1939). Over the next century, the valley would quickly transform into a landscape similar to the one that we know today. In the process, a great variety of food crops, water conservation and irrigation strategies, agricultural cooperative models, and pioneer and agrarian values would work to shape the landscape, food system, and Claremont community. This time period and the foodshed that evolved throughout it may offer us the most insight into what we have inherited in our culture and on our land.

The American Period Begins: Pioneer Settlers, Pomona College, and Experiments in Agriculture

In 1853 at the age of nine, W.T. “Tooch” Martin came to California from Texas with his mother and father (Citizens 1954). In 1842 at age eighteen Tooch filed claim for 156 acres of land in what is today the northwest section of Claremont. He is considered the first American pioneer settler of the Claremont area. At the time Tooch was able to live and subsist in a way that resembled, in many respects, the lifestyle of the Gabrielino. He hunted deer, foxes, raccoons, skunks, wildcats, mountain lions, and quail and kept bees for sage honey (Citizens 1954).



W.T. “Tooch” Martin on his front porch
Claremont Colleges Digital Library:
<http://ccdlib.libraries.claremont.edu/u/?chc,274>

At the time Tooch arrived in Claremont he is thought to have found “forty-five brush huts and two hundred Indians” living at the southeast corner of Indian Hill mesa. Some natives may have remained in those dwellings as late as 1883 when they are reported to have all dispersed from the area, likely discouraged by the increasing American settlers, or suffered deaths from declining food sources and disease (Robinson 1939). This effective removal of the Gabrielino from their native lands throughout the Spanish, Mexican, and American periods, tied directly to declining food sources and increasing difficulty of practicing native subsistence practices, is a complex and terrible

story that I have only briefly touched on, similar to the dislocation experienced at the this time by Native Americans all over the country.

With the gold rush of the late 1840s and the increased spirit to move westward, more Americans arrived in California and buy up large amounts of rancho lands. Throughout the 1840s and 1850s, as populations increased and new settlers looked for work, grapes became the dominant agricultural product. However, farmers soon realized that they could not compete with French wines so grapes went out and deciduous crops came in, particularly peaches (Wheeler 1983). The story of Stuart Wheeler, who would as an adult become a citrus rancher and mayor of Claremont, parallels the story of food and the development of agriculture in the Pomona Valley.

“The planting of the Washington Navel in the 1870s and 1880s was preceded by the pastoral era, the raising of grain, then grape-raising, deciduous growing (prunes, apricots, peaches, and walnuts), olive growing, and finally citrus growing... My earliest recollection as a child was sitting on a peach box and watching my mother and father pick deciduous” – Stewart Wheeler (Wheeler 1983).

From the period of 1875 to 1890 olives also gained prominence as an important agricultural crop. Reverend Loop, owner of a large tract of land between Claremont and Pomona, had made three different trips to Italy, getting cuttings of different olives and bringing them back to the Pomona Valley. For a short time, the Valley became the olive center of the United States. However, as with the earlier attempts to produce wine, farmers found that they could not compete for prices with Italian oil and the groves of olives began to diminish (Wheeler 1983). By 1890 the olive crop had largely deciduous crops were also declining. Citrus began to gain prominence as the dominant agricultural crop.

As the Santa Fe Railroad Company had completed the railroad from San Bernardino to Los Angeles in 1887 and a stop in Claremont (which was officially named at this time) lay right along the line, the town was then opened up for greater settlement. The railroad also provided growers with a source of secure transportation to send their crops to markets near and far (Wright 2007). Just

as the citrus industry was beginning in the valley, a smaller sort of food production was also starting as more families began to move in, largely due to the new college. Pomona College was founded in 1888 in “Ayer Cottage”, a small building located in the adjacent town of Pomona. The first principal, Edwin Norton, and the rest of the founders hoped to build a larger, more beautiful building but the Southern California economy was so bad at the time that donations for the college dried up. The college was offered a never used hotel in the paper town of Claremont and decided to make use of the offer “temporarily.” The College was almost entirely self-sufficient in these early years.

The new college had to be fed and groceries were only available in Pomona, but the new college wanted to be self-sufficient so land for gardens was prepared. A barn and stable for the college’s horses and students’ horses had to be built. Cows, hogs, and chickens were purchased or solicited as gifts (Wright 2007).

Morton Beckner, a professor of philosophy during the founding years commented that “the College was in many ways like a large farm” (Wright 2007). The farm life was so much a part of the College that one early professor even suggested that the Pomona College seal should feature a cow. In the early days of Claremont the professors each had to know how to take care of the family horse and cow as well as how to teach. Bales of hay were occasionally distributed among faculty members for their horses and cows in partial payment of their salaries. E.C. Norton, a member of the original faculty, commented that,

If our college seal had been fitly chosen, it would not have been such as it is – a conventional shield with rosy-fingered dawn sneaking up behind it. Rather should it have had a great boulder with a cow rampant, rope and stake attached, and instead of the rising sun, a lean professor with a milk pail appearing on the horizon (Citizens 1954).



Professor milking a cow in the early days of Claremont
Claremont Colleges Digital Library:
<http://ccdlib.libraries.claremont.edu/u/?chc,275>

The residential area of early Claremont consisted largely of families that were connected to Pomona College. In these early years the residences functioned largely as homesteads, supporting most of their own subsistence needs. Foodstuffs for the early settlers were generally produced on a small scale and often within individual homes or at the College. Given this, early settlers generally ate in tune with the seasons and had a profound understanding of the work that went into producing their own food.

Francis Rice Norton was one early Claremonter, a pioneer woman in the new town. “Our place grows more interesting to us all the time and I think it is going to be very pretty,” she noted in a letter to her family back east. “We have about a hundred orange trees and fifty deciduous trees of different kinds and plenty of room about the house for flowers, shrubs, lawn, etc.” The Norton family also had a little Jersey heifer that was “milking splendidly” and they were able to produce abundant butter, cottage cheese, custards and puddings with lots of milk to spare.



The Flora Smith House, Claremont 1902. Home of Miss Flora Smith and her mother on the northeast corner of Second Street and College Avenue. A woman stands on the porch while another woman stands in the garden watching a flock of chickens. Claremont Colleges Digital Library.

The Development and Growth of the Citrus Industry

By the early 1900s, most of the non-residential Claremont area was set out in orange, lemon, and grapefruit groves (Wright 1980). The transformation from the lands that the Gabrielino had occupied just a half-century earlier was drastic. Since the Mission fathers had only used the land as an experimental station it had not yet changed significantly from the landscape of pre-European contact. However, the sage scrub and oak woodland habitats that were largely intact were quickly replaced with highly controlled monocultures of citrus. Citrus was the chief industry in Claremont during these formative years of the community (Wright 1980). The citrus industry developed in conjunction with the town of Claremont and growth of the new town was largely dependent on this

crop. During the Great Depression in the 1920s, the citrus industry would allow the town to hang on and provide hope for residents.



Sixth St. in Claremont, 1893

Houses and citrus

Claremont Colleges Digital Library

[http://ccdlib.libraries.claremont.edu/u/?](http://ccdlib.libraries.claremont.edu/u/?chc,65)

chc,65

Oranges were first brought to Southern California by the Franciscan padres from Mexico and groves were first planted around Mission San Gabriel in the late 1700s (Wheeler 1983). It is likely that the first commercial planting of oranges in Southern CA occurred in 1861. Mr. Van Leuven, who farmed part of the historic Rancho San Bernardino, planted a few seedling oranges, and a year later in 1862 he planted four full acres of orange seedlings. The Palomares family developed the first grove in the Pomona Valley on Rancho San José around 1865 (Wright 1980). Although it was recognized that citrus thrived in this climate, early oranges were of poor quality and not significantly improved until 1873. The story of this improvement, and the consequent explosion of the citrus industry in Southern California, and is best told by Mr. Wheeler:

In 1873 Mrs. Elizabeth Tibbets of Riverside received from her friend, William Saunders in the Agricultural Department of our government in Washington, two orange trees. Cuttings had previously been sent to Washington by Rev. F. Scheider, a Presbyterian minister in Bahia, Brazil. These cuttings produced the Bahia Navel. They were propagated in Washington and two were sent to Mrs. Tibbets. In the late 1870s they bore their first fruit. It soon became evident that this fruit was far superior

to anything that had been planted to date. The C.C. Waite Nursery of Riverside started a large-scale nursery planting of these Washington Navels, and in 1883 introduced them in quantity. From then on the Washington Navel spread fast and became the predominant fruit planted in our San Gabriel Valley” (Wheeler 1983).

In time, over a million trees were developed by budding from the stock of these two imports (Wright 1980). One of the original trees is still growing nearby in Riverside County. The development of the crop was quite rapid and by 1880, over one million citrus trees were growing in Southern California. Less than a decade later it is estimated that over 12,000 acres were devoted to orange culture in the six southern counties and the industry was worth over \$2,000,000 (Wright 1980).

In a series of oral history interviews with citrus ranchers in 1962, conducted by Caroline Beatty and Spencer Olin of Claremont Graduate University, it was posed that there are three major reasons for the success of the citrus industry in the Pomona Valley: an abundance of water, soil suited to citrus, and freedom from frosts. Wheeler elaborated on these claims, stating that the soil was ideal – a deep, sandy loam, good for navels – and that although the water levels had gone down with time, in the early days there was an abundance of water in most of the Valley. A lot of the water came from Mt. Baldy and most landowners had artesian wells. However, the wells quickly dried up when large amounts of water were diverted for irrigation of citrus groves. After 1890 all new plantings had cement pipelines bringing water to the trees. Wheeler commented that although some of the land was very rocky, particularly above Claremont and Upland, that this was ideal lemon country (Wheeler 1983).



**Aerial view of Claremont and
Mt. Baldy, 1941**
Showing extensive citrus groves

Claremont Colleges Digital Library
<http://cdl.libraries.claremont.edu/u?/chc.25>

Even with mostly ideal conditions growers still had many concerns. In particular, they worried about controlling pests, protecting the crops from the occasional serious frosts, and ensuring their water supply for irrigation. Some of the major pests that threatened the citrus were red scale, black scale, cottony cushion scale, and white flies. Scales are small parasitic insects that feed on plant juices, taking vital sugars from the plant. They also excrete a “honeydew” substance

that can cause the growth of a fungus known as sooty mold. If infestation is severe, scales can cause tree death. Growers needed ways to respond to these threats.

Spraying started way back. In the early days it was soap and water, because we had black scale and that would stop them. We did all right with soap and water. Then we began to use emulsions which were not pure enough and had a little bit too much unsulphenated residue in it. We also used smudge oil in with soap but that sometime burned our trees badly. It was just a case of experimentation. In this the Experimental Station has been invaluable to us (Wheeler 1983).

Growers in Claremont welcomed a spray method of ridding pests in about 1920. As the industry evolved throughout this first half of the century, improved insecticides and sprayers were constantly developed (Wright 1980). As Wheeler mentioned, the Agricultural Extension Service of the United States Department of Agriculture (USDA) played a large role in supplying new mechanical inventions, fertilizers and insecticides.

Although the climate was usually ideal for citrus production, there were certain years when the crop froze and in extremely cold weather the trees could be damaged. Hard frosts seemed to run in cycles and would often hit every ten to twelve years. Beginning in the mid-1920s frost warnings were broadcast on the local radio stations, keeping people constantly informed about the climate. The broadcasting would continue until mid-century when it topped in response to a declining citrus industry. In order to protect the trees from frost and warm the orchards growers used smudge pots which burn oil and allow heat and smoke to escape and warm the orchard. These models were later banned and replaced with “orchard heaters” which were very similar. Although the smudge pots were effective at protecting the fruits, they often added more pollution to the air than is now added by smog. Early residents recall heavy, black smelly air over the entire Pomona Valley during the frost season (Wright 1980). Wheeler recalls in the 1926 freeze, when the oranges froze solid at night:

The smoke hung over the valley until noon and let the oranges thaw out slowly without letting the sun hit the fruit, and in that way we saved our fruit. Now, as more

people have moved into the valley who do not like the smoke, for which I can't blame them, we re having to change to smokeless heaters (Wheeler 1983).

Wheeler noted that he himself had devised a method of pressurizing their house so that the dirty air would not enter. Citrus growers also experimented with using straw to protect from frost as well as wind machines, though these were most effective when used with smudge pots.



Snow-Covered Citrus Groves in Claremont, c 1919-1923

Claremont Colleges Digital Library, <http://ccdlib.libraries.claremont.edu/u/?/chc,55>

Growers also worried about ensuring a reliable supply of water for their crops. In the 1800s large artesian springs and year-round streams still flowed through Claremont. A reliable stream flowed past the Indian Hill mesa, which is now within the Rancho Santa Ana Botanic Gardens, and there were springs where Memorial Park is located (Wright 1980). The land around Pilgrim Place was known as *La Cienaga* (the bog) and was all marshland full of nettles and beds of cattails, teeming with thousands of birds (Citizens 1954). In time, the wells dug to supply citrus irrigation

lowered the ground water level and the marshland and springs dried up. In Claremont and the Pomona Valley, as throughout all of the arid western states, first usage established water rights and thus early growers were given preference to available water.

Early on, growers and other settlers recognized that a natural trap of the alluvium at the mouth of the San Antonio Canyon would be an effective means to capture winter rain and stream flow to be stored in the underground basin for summer use. In the early 1900s the Los Angeles County Flood Control District paid Himon N. Pierce to work on developing an effective system for water storage and conservation. Working alone with a shovel in the rocky waste deposited at the mouth of the San Antonio Canyon, Pierce lay out a series of shallow streambeds to serve as spreading grounds for the canyon's floodwaters (Wright 1980). [picture]

The theory was that if the wild flow could be diverted into several beds and then divided among many smaller ditches, it would seep down through the deep porous gravel into the great natural underground basin of the foothills. Floodwaters that had always been lost in runoff through the age-old 'wash' in the eastern part of Claremont would thus be saved for use during the long dry season. (Citizens 1954).

This pioneer effort in water conservation proved to be extremely successful. The method was conceived of by local citrus growers and well owners. To put the method into practice they formed the Pomona Valley Protective Association (PVAP) in 1909, which emerged as one of the first cooperative water conservation areas in the country. Collectively, they purchased 600 acres at the base of the canyon (Wright 1980, Citizens 1954). The PVAP still exists today and owns and operates approximately 1,000 acres of land in Los Angeles County and San Bernardino County. Modern diversion equipment and elaborated ditching have been added to the process but the basic principles still stand and the method has spread around the United States and to several other countries.

As the citrus industry began to develop in and around Claremont packing houses also sprung up in the area, bringing new employees and creating jobs for local residents. Citrus growers also

began to organize in attempts to gain greater profits and more efficiency in packing and shipping the fruits. Peter J. Dreher had planted the first orange trees in Claremont proper in 1888, just before Pomona College moved into the Hotel. Dreher's citrus was selling well but by 1882, even with the phenomenal growth in the size of the industry, growers' returns were often nothing but freight bills due to the high cost of packing and shipping the fruit (Wright 1980).

In response, Dreher and other growers in Claremont formed the Southern California Fruit Exchange. Their united action gradually brought greater profits as well as increased standardization. To build a reputation for quality, all of the oranges from various ranches were graded and sold according to grade. In its first season in 1893 the association shipped 21 carloads of oranges with substantial returns to all members. The first direct shipment was sent all the way to Europe and one box reached Queen Victoria in time for her birthday in 1893. The oranges were 39 days in transit (Wright 1980). The exchange soon included groves in Pomona, Riverside, and San Dimas, in Los Angeles County, as well as groves in Ventura County.

By 1905 the group represented almost 50% of the California citrus industry and renamed itself the California Fruit Growers Exchange. In 1908 the group would again rename itself as Sunkist, the name it retains today as a large cooperative owned and operated by California and Arizona citrus growers. Sunkist is now the oldest continually operating citrus cooperative in America and the largest marketing cooperative in the world's fruit and vegetable industry (Sunkist website).

This Pomona Valley citrus industry, while fueled in part by the ideal citrus climate and ingenuity of Claremont growers, was largely supported by the workers in the fields and packing houses. Workers were mostly men of Chinese and Mexican descent, though women also participated in smaller numbers and more often in the packing houses. In the early days almost all of the hired help in the citrus groves consisted of Chinese laborers. Chinese laborers also raised

their own small vegetable gardens in Claremont, on the former marshland area, which provided fertile, loamy soil for vegetable production. Produce was consumed for subsistence and sold to local grove families. The Chinese laborers lived in small houses in Claremont until about 1915 when the allocation and expense of water made the gardens too expensive to run (Wright 1980). Wheeler noted, “the Chinese helped pick our fruit until about 1917, when we turned to Mexican labor” (Wheeler 1983)

In 1913 workers were paid 30 cents an hour and 2 cents per box picked. The average worker picked around 60 boxes a day. Workers were subject to many of the poor conditions experienced at large farms and factories in the early 20th century, though work became more regulated over time, including better hours and fairer wages (Claremont history). The influx of workers led to the formation of barrios, or small worker neighborhoods, around Claremont. Some of the barrio residents also worked for Pomona College or construction groups in the area. The East Barrio, located just east of Mills Ave., was one close community of Mexican and Mexican-American families. The East Barrio was relatively stable from the 1920s until 1973, but since then has been largely obliterated by new development.

Until World War I these groves were mostly small land holdings, of 10 acres and smaller. Until the 1920s agriculture in the Pomona Valley consisted largely of small citrus groves and subsistence farms. Before 1920 most families also had citrus trees and often some other crops in their yards to provide food for their families (Wright 1980) After World War I the citrus industry was truly considered big business and prices of land were rising, leading to larger concentrations of land and an increase of groves that were ten acres and larger.

While the pioneer efforts in water conservation were significant in allowing the growers to initially succeed, the whole picture changed when sprinklers came in during the early 1940s. Growers were then able to easily put water directly where the trees were and would water from four

to eight hours every ten days (Wright 1980). Improved irrigation methods in combination with the success of the industry caused it to boom and by the 1940s it had evolved into a multi-million dollar business for the Pomona Valley.

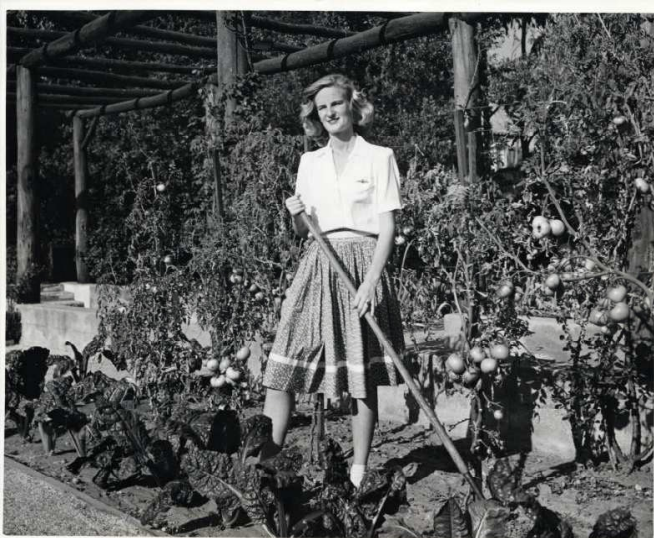
A Brief Return to Agrarian Roots

By the 1940s, as the citrus industry and the Claremont Colleges had experienced consistent growth, the character of residential life in Claremont had changed, resembling less of an agrarian community. However, like other small towns across the country, Claremont residents participated in the Victory Garden movement during WWII (Claremont history). Civilians planted victory gardens, also sometimes referred to as war gardens or food gardens for defense, at residences during WWI and WWII to contribute to the war effort and reduce the pressure on the public food supply. Victory gardens provided a tangible and important way for Americans on the home front to help during the war and it is thought that the combined efforts may have provided up to 40% of the nations food supply at the time (citation?). The majority of these gardens were planted in front yards and back yards at private residences, though college students also worked to included their campuses. Students at Scripps College joined in this effort and planted vegetables in a garden on the northern part of the Scripps campus.



Photos from “Cutting Garden” at Scripps College, notes speculate that it was likely a victory garden, circa 1944-1945

Claremont Colleges Digital Library
<http://ccdlib.libraries.claremont.edu/u/?ccp,4565>



Decline of the Citrus Industry and Suburbanization of Claremont

The peak years of the citrus industry in Claremont were the mid to late 1940s. By the beginning of the 1950s, however, the post-war housing boom, increased property taxes, and residential encroachment offered incentives to many area growers to sell their land for housing developments (Wright 1980). The changes in land use were swift and dramatic. By the 1960s, Claremont was considered part of the growing Los Angeles Metropolitan area and it began to host a commuter population, a shift that also brought with it increased use of the automobile and a significant increase in smog in the Valley. Citrus growers in the valley found that in addition to higher property costs and suburban encroachment, high levels of pollution made it more difficult to raise a successful crop with increased smog reducing their yield by as much as 75 percent or more (Wheeler 1983).

By the late 1970s agriculture had virtually disappeared from the Claremont area. One of the last groves to remain was run by an original grove family, the Naftels, who grew lemons until the early 1970s at which point most of the land was sold for development. In the Natural Environment Element of the Claremont General Plan, written in May of 1978, the City summarized its role and goals as steward of all lands within its jurisdiction, “intending to take an active role in the management of its natural resources for the benefit of the greater community” (City of Claremont 1978). As part of the plan the City identified the preservation of open space as a conservation goal and a public need. Within the category of open space the city identified three types of open space: for preservation of public resources, for the managed protection of resources, and for outdoor recreation. In describing land needed for the managed protection of resources the Plan states:

Land needed for the managed production of resources include prime agricultural lands and lands for mineral production. Prime agricultural lands are those lands used regularly for extensive cultivation and are found to be most suitable, based upon a soils analysis. Prime agricultural lands have soils which are nearly level, deep, and moderate to fine texture with a high natural fertility... The current tax structure, which places values according to the “highest” use, encourages the conversion of prime agricultural land to residential and other

uses. Citrus, once a prime agricultural industry in the valley, has all but disappeared due to urbanization, taxation, and air quality impacts. The Claremont area has little agricultural land now remaining (City of Claremont 1978).

This trend of farmland conversion to urban and suburban uses continued throughout all of Los Angeles County in the years to follow. To complicate matters, Claremont, like the majority of cities in California, also happens to be located on top of some of the county's (and state's) most productive farmland, generally in valleys and on coastal plains such as the Los Angeles Basin. From 1984 to 2006, over 18,000 acres of farmland was lost in L.A. County, mostly to urban land uses (American Farmland Trust 2007). In California, almost two-thirds of all land urbanized from 1990 to 2004, about 327,000 acres, was agricultural land (American Farmland Trust 2007).

Chapter 5

Foodshed Analysis Through A Historical Lens

In 2009, we live and eat with the entire history of Claremont – as the foraging grounds of the Gabrielino, the experimental lands of Mission San Gabriel, the cattle ranch of Mexican families, the small city propped up by a citrus industry – holding us up from beneath. In attempting to answer the question ‘How did we get here?’ a deep and complex story of this landscape and the people who lived on it has been told. Each moment in time offers insight into the ways we produce and consume food today and guidance for other ways we might choose to do so.

In this final chapter I discuss the major lessons we might take from the history narrated above, with particular consideration for how a more profound understanding of that history can help us to dismantle the present food system and create a sustainable foodshed in Claremont today. The three chapters provide different keys to understanding the story, different lenses through which to view the present and future. The Gabrielino can offer us the most wisdom about how to eat and produce food in a conscious and sustainable way; the missionaries present us with a heavy legacy to be unraveled and scrutinized; the American settlers and citrus ranchers reveal important advice for preserving agricultural land and increasing small-scale production of food in our backyards.

What is most significant and relevant about these stories when viewed together is that they all took place on the same ground we stand on today in Claremont, each building off the one before it. The asphalt under our feet may be relatively new but the ground beneath it is the same one that has been here for centuries and the soil speaks powerful words if we listen to it. In listening, we acknowledge the debts of knowledge and interpretation we owe to previous generations and approach the present with relevant and distinct questions and concerns.

With a clearer past against which to gauge the contemporary situation, I hope to articulate options for the present food system that build upon this historical foundation. While I generally

advocate for a renewed foodshed - a local community-based food system that is abundant in organic foods - I do not mean to reduce the food system dilemmas we face to simple dichotomies of local vs. global or organic vs. conventional. Notions such as “benevolent local” and “hegemonic global” are often romantic and clearly simplify many of the bigger issues (Goldstein 2009). The gulf between producers and consumers in the modern food system is surely not a neat, easily bridgeable and the global connections that have been established over time are deeply complex. Working to create a sustainable foodshed requires the acknowledgement that the global food system has forever intertwined us with the rest of the world and our decisions, whether seemingly beneficial or not, have far reaching consequences. Thus, all efforts in Claremont must involve working with other communities in the region and the larger global community to create more sustainable and just relationships around food. A large part of this involves learning to play the role of producer and consumer at the same time, an issue I will return to later in the chapter.

In the discourse and practice of creating sustainable food systems, other significant issues have been simplified, particularly the politics of race, class, and gender (Goldstein 2009). Furthermore, there is no easy model that can be designed to adequately address all of these issues, as every community is unique and every eater will pose different concerns, as food is a deeply personal medium through which change can occur.

Yet if we stop and slow down, two important points might be made about the complexity of food system issues. Firstly, that all of these modern food dilemmas have deep historical roots. It did not happen all of sudden that certain communities lack adequate food, that health problems linked to diet are widespread, or that the natural environment is negatively impacted from agricultural runoff and greenhouse gases. A specific set of roads brought us here. Knowing that path is essential to knowing the present and we must know the present to change it. A historical lens allows us to approach the task of recreating the food system in a fresher light and with increased clarity.

Secondly, that change will take a long time but it is only essential that we start somewhere and we start now. The fact that all communities are unique ultimately requires us to start small, on the ground, and with abundant knowledge of the place in which we seek to make change. These points and the work I have presented throughout this entire project do not make the task of food system reform any easier, but perhaps offer some clearer options for how to begin this work we are called to.

Ultimately, the goal is for *all* communities to experience greater levels of food sovereignty – the ability to define their systems of food and agriculture, and increased food security – the obtainment of a safe, culturally appropriate, nutritionally adequate food supply produced in a sustainable way. For Claremont, I propose that the first place to start is with increased localization of food production as the foundation for a thriving foodshed. With this in mind, I have worked through the past to offer forward thinking and historically attuned options for doing so.

Native Wisdom

It is easy to romanticize the lifestyles of the Gabrielino and other Native American groups, as I admittedly may have done in parts of the first chapter. However, in gaining insights from native subsistence practices I have tried to take a critical and reasoned look. The Gabrielino, while thought to have lived contentedly and with generally adequate food supplies, still faced many hardships during the time before European contact (McCawley). Food shortfalls sometimes occurred and there may have been times during the year when communities were overworked in foraging for foodstuffs. Still, I principally take away valuable advice from their foodways. The overall sustainability of their practices, exhibited by their preservation and enhancement of the ecosystem for both human use and intrinsic value, offers many timeless lessons.

Nature as teacher factored significantly into the Gabrielino worldview, a mindset that we are severely in lack of today. In carefully choosing settlement sites near various eco-zones and sufficient water, the Gabrielino acted with respect for nature's parameters. The diversity of food sources available in the various eco-zones provided a high level of food security. The Gabrielino also deliberately modified the landscape to enhance it for their use, yet still maintained the overall integrity of the ecosystem. While the Gabrielino obtained the bulk of their subsistence from the landscape they lived on, they also made sure to secure food supplies from other areas in the case of food shortfalls and to add diversity to their diet. In all of these choices, the Gabrielino successfully provided themselves with a varied and nutritious food supply.

In applying this wisdom to the present with the goal of developing a local foodshed, we must begin by looking to nature again. We must come to intimately know the climate, native vegetation, and wildlife indigenous to this area. Although much of Claremont is highly developed, we are lucky to still be extremely close to wilderness areas and the San Gabriel Mountains, which have maintained much of their pristine nature. We must also observe the areas we hope to modify for food production, find as much information we can about how they have been used, and watch carefully how they change over time and respond to human intervention. In focusing on this area, we are also compelled to be realistic about what foodstuffs should still be obtained from elsewhere and thus the relationships that are most critical to maintain and improve.

When the Gabrielino lived here the population of the Claremont area and all of Los Angeles County was significantly smaller than it is now. Still, it is important to note that at the time of Euro-American contact California was more densely populated than any area of equal size in North America, north of central Mexico (Anderson et al. 1998). Even with a relatively large population for the time, the Gabrielino practiced careful land use management to create a landscape that produced enough food for subsistence. In the present, we can participate in the same type of land use

management by preserving agricultural land surrounding Claremont or converting previously developed land back to land suitable for food production.

Many of the native wild edibles that the Gabrielino subsisted on can still be found in the Claremont area today, especially farther up in the foothills. In a recent presentation given at Pomona College by Jan Timbrook, ethnobotanist and historian of the native Chumash group, she spoke of this availability present to us today. Timbrook reminded us that while some of these native edible species can still be found, their populations are significantly reduced from the time the Gabrielino lived here and leaving them in their natural state, rather than consuming them, is critical for maintaining species populations and conservation of biodiversity (for more on native ethnobotany see Timbrook 2007). While Timbrook makes an important point, there are still lots of options for consumption of and education from wild edible species. A host of wild edibles that are not native to the area, usually plants that we know as weeds, grow around Claremont (even right in our backyards and sidewalk cracks!) and be consumed after sufficient research. This information is available in a variety of wild edible guides (Nyerges, others I will list). In planning for local food production, coming to know and observe the native edible species also allows us to gain a better understanding of the types of native edible plants grow best in local conditions.

A final significant feature of the Gabrielino subsistence strategy was that every member of the community participated in the foodways in some manner by helping to hunt, gather, fish, create ideal environments for desired foods (by burning the land, scattering seed, or through other modifications), or prepare foods. This communal participation in which everyone played a vital role in creating a secure food supply is essential to a successful foodshed at any time in history. Today, it is especially clear that a local foodshed would involve all community members taking a more active role in the food system, beyond that of consumers - the most common role we all play today.

In creating a community of active agents, “the production and consumption of food could be the basis for the reinvigoration of familial, community, and civic culture” (Kloppenborg et al., 1996)

The Legacy of Colonial California

The story of the Spanish and Mexican periods in California during the 18th and 19th centuries helps us most to understand the larger structures and decisions that have determined many components of our food system today – from the way we use land to the specific foods we eat. Although today our methods of food production and consumption differ in many ways from this time, it remains the basic foundation for the modern food system. In implementing large-scale intensive agriculture and cattle ranching, the native subsistence patterns and lifeways of the Gabrielino were ultimately rendered impossible, starting upon a path of domination that our food system has since followed. In combination with the ecological change and diversity loss that this system brought, particularly the rapid elimination of significant numbers of native plants, we see that the foundations of our modern food system are rooted in a destructive past.

With recognition that our food system is failing today, articulating the history of the large-scale, industrial components of that system as destructive throughout time helps us to pose strong arguments against them. Namely, that they have consistently created unjust and unsustainable conditions for humanity and the natural world. With centuries of history to support our claims against the modern food system, and this particular time period as a clear and important example of its harmful nature, we can return to the alternative food movement with a more profound and focused argument and vision.

The American Period

From 1887, when the railroad first ran through Claremont, until the middle of the 20th century the landscape of the Pomona Valley was shaped almost entirely by food production. From the backyard farms of pioneer settlers to the extensive citrus groves that blanketed the alluvial plain coming off the San Gabriel Mountains, the landscape was certainly edible. It was also highly profitable during that time and after growers established a cooperative marketing structure they were able to make substantial returns on their use of the land.

The pioneer settlers of Claremont, primarily faculty and students associated with Pomona College, subsisted off the land in a way that is still possible for us to do today. Many of the houses that were built at this time still stand today. Though renovated and surrounded by more of the built environment, the chicken coops and small garden plots of the early settlers offer a model for using the land around houses in Claremont today. While it was initially difficult for these settlers to obtain foodstuffs if they did not produce them, they also took pride in achieving high levels of self-sufficiency, an attitude we would be prudent to adopt in some form today.

The large-scale agricultural development that began around the same time – grapes, olives, peaches, and finally citrus – offers many lessons as well. The citrus industry brought about significant innovations in social organization and natural resource conservation, two significant issues we grapple with today in addition to food system dilemmas. The Southern California Fruit Exchange, now Sunkist, created a community of growers and proved extremely successful in providing higher profits to growers and higher quality fruit to consumers. The growth of the citrus industry also led to the development of a unique and innovative system of water conservation that is still in use today. These examples show some of the capacities of local food production to promote community values and encourage environmental stewardship. As in the case of water conservation

in Claremont, engaging with the natural world through food production can allow individuals to think more critically about natural resource and conservation.

Large-scale food production around Claremont was eliminated by the 1970s largely because of changes in the tax structure and zoning laws, making the land much more profitable and desirable for suburban development. As we see farmland decreasing all over the nation, we look to this example to realize that when placed in an economic model, food production will usually lose to housing. Without any protection of agricultural land in the 1950s and years after, the citrus groves of Claremont rapidly disappeared, altering us to the importance of establishing such restrictions. If we strive towards the creation of a local foodshed, a significant step will involve setting land aside for agricultural use and protecting it from development.

A Food System Redesigned: Preserving Historical Roots, Sowing New Seeds

Collectively, these three stories offer us historical backing for arguments against the present food system and guidance for creating a more sustainable alternative. The history also reveals a pattern of *agency*, where local people consistently made radical and sweeping changes in the way they ate and produced (or did not produce) food. While many of these changes had negative consequences for certain peoples and the environment – particularly during the colonial era – the actions should offer hope for the capacity we have today to make change. We must once again take agency in our foodways to begin to heal our communities and environment.

In 2009, in the State of California, the average farm size is 313 acres and there are a total of 81,033 farms covering the state. Los Angeles County, the most populous county in the state and

country, is host to 1,734 of those farms, of which the average size is only 63 acres. A majority of those farms, over 1,100 of them, are between one and nine acres. The top agricultural items produced in the county are vegetables (especially carrots and onions), forage crops (hay and grass feed for livestock), and nursery stock. The country also produces grains, dry beans, fruits, tree nuts, and berries, and farmers raise chickens for meat and eggs, cattle for beef and dairy products, as well as pigs, sheep, goats, and other animals (USDA 2007). This diversity is testament to the productive capabilities of the county. The existence of primarily small, family farms offers great hope for the creation of a local foodshed.

In Claremont, a City in the southeast corner of the County, there is little actual food production occurring today but many local efforts to work towards increasing this effort. A combination of efforts have emerged to create a patchwork of home, school, and community gardens as well as a number of options for purchasing local and non-local sustainably produced food.

The Claremont Forum, a community non-profit organization, has been at the center of many of the efforts to make local foods available for purchase. Their mission, to promote individual and social well-being through education, the arts, and wellness programs, rightly includes food work (The Claremont Forum 2009). The Forum supports a Sunday Farmer's Market, which supplies fruits and vegetables, many of which are organic, from over a dozen local farmers. Local artisans also sell handmade soaps, crafts, and clothing at the market. Recently, the forum also began hosting a Wednesday Night Green Market, which offers fresh, local organic produce, artisan crafts, and green living information. The Green Market has also emerged as a networking space where individuals in the community who are engaged in sustainability and food justice efforts gather together.

Many supermarkets in Claremont are also beginning to offer more locally produced and organic options. In particular, a natural food store called EcoTerra recently opened in Claremont and offers a variety of local and organic produce and other organic foods (EcoTerra 2009). The store also supplies holistic medicine and environmentally sound household items.

The Claremont Colleges have played a large role in the effort to increase local food production. In addition to the Organic Farm at Pomona College, Scripps College and Pitzer College also host student-run organic gardens. Pitzer has an additional community garden that is open for community members to take ownership of plots each season. In total, the three spaces provide close to four acres of food production within Claremont. Located on the campuses of three top colleges, these gardens also provide an important and needed space for agriculture and food education in the community. The Colleges have recently begun to include more academic classes relating to sustainable food production, particularly the Farms and Gardens class within the Environmental Analysis department at Pomona, offered every spring semester.

The final front of food activism in Claremont has come from community members, many of whom are associated with a group called Food Not Lawns.

Claremont Food Not Lawns is a local community organization dedicated to replacing our lawns with edible gardens in the name of sustainability and self-sufficiency. We hold monthly meetings, which are both social and educational. Each meeting is a potluck dinner and a workshop/presentation on gardening related topics. We believe growing our own food greatly improves our health, reduces our carbon footprint, creates community, and saves money. We invite you to join us in this beautiful struggle. – Group Mission Statement (Claremont Food Not Lawns 2009)

Collectively, the group takes on a few lawns each season and tears them out, replacing them with edible food crops. The residents of each home whose lawn is removed then tend the garden organically and consume the produce. The action is significant for these families, particularly by increasing the sustainability of their food supply by using organic methods and eliminating transport as well as reducing food costs. The action of lawn removal also makes a loud and important

statement in a neighborhood that otherwise primarily covers its front yards with grass, a water hungry plant that is certainly not edible or appropriate for our climate. In seeing food gardens instead of lawns, people can begin to visualize a new and more sustainable aesthetic and landscape for their homes. The front yard becomes a space for food production, sustainable concepts made tangible, community engagement, and a bold statement about the impact we can each have on the environment.

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

**Before and after shots of a lawn
removal (completed in one day by
Food Not Lawns members)**

(Claremont Food Not Lawns 2009)

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

Food Not Lawns members working on the garden after removing the lawn.
(Claremont Food Not Lawns 2009)

By creating a very visible message, the group has been particularly successful in sparking an active dialogue about local food production in Claremont. The group has been meeting for about a year now and the founding members - a couple that have lived in Claremont for many years and put amazing amounts of effort into the group - have seen growth in community interest and support during that time. The regular workshops also allow community members who cannot or do not wish to plant gardens at their homes to learn about and implement related projects such as home composting, seed saving or a raw food diet. On January 31, 2009, an International Seed Swap Day of Action, the group hosted a seed swap in Claremont with a huge turnout of community members. Those who came were able to exchange seeds or just simply take seeds at no cost, returning to the way in which seed has traditionally been acquired by farmers and gardeners, rather than purchasing it through seed companies.

Recently, members of the group have also started an agricultural landscaping firm called 'Farmscape Gardens'. The firm tends raised-bed organic crops in the yards of homeowners who

wish to grow local, organic vegetables on their property but may not have the time or ability to care for a garden. The homeowners receive the harvest and all of the other benefits of the garden (increased sustainability, reduced food costs) but pay Farmscape Gardens to have the work done. Since many Claremont residents already pay landscapers to maintain their property they may not have to pay any additional costs to switch companies and put in an edible landscape. They may even reduce their overall costs given the money they will save from reduced food costs. The group states:

[We envision] delicious vegetables grown using organic methods right in your backyard, picked when ripe and eaten while bursting with flavor. We strive to yield only healthy and delicious vegetables, to eliminate many of the environmental costs now standard in industrial agriculture, and to make growing and eating food into community activities rather than disinterested rituals of consumption (Farmscape Gardens 2009, see www.farmscapedgardens.com)

In addition to the home gardens popping up all over Claremont, with and without the help of the Food Not Lawns group and Farmscape Gardens, we also find ourselves in a City plentiful with fruit trees. A large percentage of residences have orange or lemon trees. There are also many public fruit trees on Claremont streets and the college campuses have a great number of fruit trees, the harvest of which is free and most likely organic or minimally treated.

The work towards an alternative food system already present in Claremont is exciting and offers a lot of hope for the future. Returning to the foodshed concept, I advocate for improvement using the framework of a suburban foodshed and a larger focus on the roles we might play as producers rather than just consumers. If community members work together, each envisioning themselves playing some role in creating a sustainable and secure food supply for Claremont, the possibilities are endless. Given that most residences already have small plots of land and available water, food production could increase significantly. Businesses such as Farmscape Gardens offer

the potential for food production even if the landowner does not have the time or ability to grow the food themselves.

Contemporary Advice

To work towards establishing a contemporary foodshed, with the primary goal of increased local food production, I identify two main areas of action. Though I only give brief outlines for achieving each, they will hopefully encourage further thought and investigation.

1. Increase food production within the City of Claremont: at private residences, public spaces, and schools.

Cities such as Claremont offer great opportunities for the creation of a suburban foodshed. Owen Dell, a landscape architect from Santa Barbara, California, has promoted this concept advocated for a suburban foodshed in his own neighborhood, suggesting that “we have a wonderful opportunity to bring food production back home, literally, by cooperating with our own neighbors to grow our own food on our own land” (Dell 2009). Dell offers the idea that each household could concentrate on growing one or two different crops, a less intimidating thought than trying to grow all of the crops that you would want to include in your diet, and at harvest time all of the crops would be shared by all neighbors participating. The City of Claremont, in the new Sustainable City Plan, has actually suggested a similar model with respect to fruit trees, where neighbors would participate in a “fruit exchange”, allowing them to trade the extra harvest from their trees for other fruit from neighbor’s trees (City of Claremont 2009, Sustainable City Plan).

This is just one option for increased community organization and networking around local food production. The Food Not Lawns group has focused on group work and educational workshops, which is another great way to encourage individuals to grow their own food. Another

useful tool might be increased communication amongst home gardeners in Claremont and with the student gardeners at the Colleges through some sort of forum in order to share gardening tips, community goals, and the local harvest. While one Community Garden exists in Claremont, adjacent to the Pitzer College Garden, an increase in community garden space would be extremely beneficial to this process, allowing community members to garden next to another, providing garden space for those who do not have any, and establishing the precedent that the City deems local agriculture a valuable use of public land. While there is not a great amount of vacant land in Claremont, there are a few dispersed parcels that could be considered for community garden space.

The key in all of these strategies, and a foundational concept in creating a local foodshed, is working together as a community and providing community support to individuals.

2. Protect and increase the agricultural land around Claremont through farmland protection programs.

Given the fact that Claremont and much of the surrounding area is largely developed, achieving a sustainable foodshed will mean protecting the agricultural land that already exists around us. This means that the 1,734 farms already in Los Angeles County, as well as farms in nearby counties, should be immediately protected from development. The most effective way for doing this is through some form of farmland protection program.

One effective and feasible type of farmland protection is creating agricultural protection zoning. This refers to county and municipal zoning ordinances that support and protect farming by stabilizing the agricultural land base (Fact Sheet). In California this is possible through the California Land Conservation Act, also known as the Williamson Act, which creates farmland security zones. Legislature passed the Williamson Act in 1965 to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses. The Act creates

an arrangement whereby private landowners contract with counties and cities to voluntarily restrict their land to agricultural and compatible open-space uses. In return, restricted parcels are assessed for property tax purposes at a rate consistent with their actual use, rather than potential market value. The Williamson Act is estimated to save agricultural landowners from 20 percent to 75 percent in property tax liability each year (California Department of Conservation 2009).

There are many other options for farmland protection that have been successful throughout the country. Plans that successfully protect agricultural land generally include land use policies and programs in combination with economic development tools. Land use policies and programs might include purchase of development rights, transfer of development rights, agricultural districts, zoning, cluster zoning, right-to-farm and tax relief. Economic development tools include agritourism, direct marketing, branding of local agricultural products, value-added processing and product diversification (American Farmland Trust 2009). For more information on all of these options see the Farmland Information Center website (www.farmlandinfo.org), which is a clearinghouse for information about farmland protection and stewardship

Other Places to Begin/ Suggestions for Future Research

With creativity, there are infinite ways to make the current food system more transparent and sustainable. I took the path of a historical analysis in order to provide local solutions and options for the creation of a contemporary foodshed. Below I list a number of other project ideas that came to me while working on this research. All of these represent some type of foodshed analysis:

- Create community maps of public fruit trees, home gardens, and community gardens
- Create a database of local wild edible plants, where to find them, and how to use them
- Create a community database of gardeners

- Survey nearby vacant lands that could be used for food production
- Determine how much agricultural land is located and what crops are grown within a certain radius of Claremont – Within 50 miles? Within 100 miles?
- Research farmland conservation programs that would be appropriate for this area
- Conduct community interviews about food-related concerns and hopes or ideas for the future
- Analyze other community foodshed reports for ideas (citations)

These are just a few options in a long list of possibilities. Ultimately, the best way to begin is with your hands in the soil. The best ideas usually emerge in those moments.

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