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Dormant Ethnobotany:

A Case Study of Decline in Regional Plant Knowledge

in The Bull Run Mountains of Virginia

By Susan Leopold
TABLE OF CONTENTS

ABSTRACT ........................................................................................................................................... 1

CHAPTER 1. INTRODUCTION TO DORMANT ETHNOBOTANY ........................................................... 2

CHAPTER 2. RESEARCH METHODS ......................................................................................................... 12
  2.1 MIXED METHODOLOGY APPROACH ............................................................................................. 12
    2.1.1 Qualitative interviews ........................................................................................................... 16
    2.1.2 Ecological studies .................................................................................................................. 22
    2.1.3 Triangulation ......................................................................................................................... 25
  2.2 CASE STUDY SELECTION ................................................................................................................. 26

CHAPTER 3. ESTABLISHING THE CRITICAL TRANSITION PERIOD TO DORMANT ETHNOBOTANY ... 33
  3.1 THE GREAT DEPRESSION .............................................................................................................. 34
  3.2 WORLD WAR II .............................................................................................................................. 43
  3.3 THE POST-WAR ERA ...................................................................................................................... 45

CHAPTER 4. DORMANT ETHNOBOTANY FROM THE SOCIO-ECONOMIC PERSPECTIVE ............. 50
  4.1 ETHNOBOTANY AS AN INPUT OF HUMAN CAPITAL INTO HOUSEHOLD PRODUCTION ............... 51
  4.2 EFFECTS ON THE STRUCTURE OF THE LOCAL ECONOMY ......................................................... 54
  4.3 IMPLICATIONS FOR THE CONCEPT, CAUSES, AND CONSEQUENCES OF DORMANT ETHNOBOTANY .............................................................................................................. 59

CHAPTER 5. DORMANT ETHNOBOTANY FROM THE CULTURAL PERSPECTIVE .......................... 61
  5.1 SENSE OF PLACE ............................................................................................................................ 65
  5.2 INSIGHTS OFFERED BY FOLKLORE ............................................................................................ 69
    5.1.1 Knowledge as power and necessity ....................................................................................... 81
  5.3 CULTURAL ISOLATION AND SOCIAL STIGMATIZATION AS A FACTOR IN THE TRANSITION ... 82
  5.4 IMPLICATIONS FOR CONCEPT, CAUSE AND CONSEQUENCE OF DORMANT ETHNOBOTANY ......................................................................................................................... 88

CHAPTER 6. DORMANT ETHNOBOTANY FROM THE ECOLOGICAL PERSPECTIVE ........................ 91
  6.1 ECOLOGICAL COMPARISON OVER A 50-YEAR PERIOD ................................................................ 93
  6.2 HUMAN-PLANT INTERACTIONS ................................................................................................... 103
    6.1.1 Foraging .................................................................................................................................. 104
    6.1.1 Fires ......................................................................................................................................... 113
  6.3 TRANSITION TO DORMANCY – NATURAL FACTORS (THE CHESTNUT BLIGHT) ...................... 115
  6.4 TRANSITION TO DORMANCY - THE ROLE OF THE MODERN CONSERVATION ETHIC ................ 117
  6.5 CONSEQUENCES OF DORMANT ETHNOBOTANY ON THE ECOLOGY OF THE BULL RUN MOUNTAINS .................................................................................................................. 125
  6.6 IMPLICATIONS FOR THE CONCEPT, CAUSES, AND CONSEQUENCES OF DORMANT ETHNOBOTANY ......................................................................................................................... 127

CHAPTER 7. CONCLUDING THOUGHTS AND INSIGHTS ...................................................................... 131

LITERATURE CITED ................................................................................................................................. 146

APPENDIX I. INTERVIEW GUIDE OF QUESTIONS ................................................................................. 156

APPENDIX II. IMAGES FROM ALLARD’S JOURNAL .............................................................................. 162
TABLE OF FIGURES

FIGURE 1. LOCATION OF THE BULL RUN MOUNTAINS (CIRCLED) IN VIRGINIA. ............................ 3
FIGURE 2. COUNTY MAP OF VIRGINIA. ....................................................................................... 15
FIGURE 3. MAP OF VEGETATION PLOT SAMPLES. ...................................................................... 25
FIGURE 4. MAP OF CONSERVATION AREA IN THE BULL RUN MOUNTAINS. ......................... 30
FIGURE 5. PHOTO OF BULL RUN MOUNTAINS. ......................................................................... 31
FIGURE 6. MANEUVER GROUND WITH CROPS, 1904. .............................................................. 38
FIGURE 7. PHOTOGRAPH OF ALDIE MILL. .............................................................................. 39
FIGURE 8. GRAPH OF U.S. CENSUS BUREAU STATISTICS OF PRINCE WILLIAM COUNTY .... 46
FIGURE 9. BEVERLY MILL........................................................................................................ 48
FIGURE 10. MANIFESTATION OF CULTURE AT DIFFERENT LEVELS OF DEPTH ................... 63
FIGURE 11. MAP OF VIRGINIA 1787. ..................................................................................... 74
FIGURE 12. HOMESTEAD. .......................................................................................................... 78
FIGURE 13. MAP OF ONE OF ALLARD'S OBSERVATION LOCATION. ........................................ 96
FIGURE 14. PHOTOGRAPH OF LOST JOHN. ............................................................................ 104
FIGURE 15. PHOTOGRAPH OF JACK DAWSON AND HIS HOUSE. ........................................ 107
FIGURE 16. HAND WOVEN BASKET. ...................................................................................... 113
FIGURE 17. TIMELINE OF KEY EVENTS. .................................................................................. 134
FIGURE 18. LEK AND ITS SOCIAL AND COMMUNITY BENEFITS IN THE BULL RUN MOUNTAINS. 142
ABSTRACT
This dissertation introduces and applies the concept of dormant ethnobotany, a concept that helps explain the socio-economic, cultural and ecological aspects and implications of the transition away from active use of ethnobotanical knowledge and the factors that may lead to its re-emergence. Dormant ethnobotany is the study of relationships between people and plants that are inactive, but nonetheless still alive in memories, the historic record, and folklore and thereby capable of reemergence in support of the transition to a more sustainable society. The dissertation extends the field of ethnobotany from its current roots in the dynamic ethnobotany of indigenous peoples. I studied dormant ethnobotany from three significant perspectives – socio-economic, cultural, and ecological – using a multiple methods approach and in the context of a case study of the Bull Run Mountains of northern Virginia’s Piedmont Region. The research is further refined by focusing on the mid-1940s to the mid-1950s as the key transition period from dynamic to dormant ethnobotany in this geographic area. Each perspective helps shape the concept of dormant ethnobotany and explains its causes and consequences. In this abstract I state key findings about the significance of dormant ethnobotanical research, how it should be conducted, and its relevance to sustainable development. Understanding the causes and consequences of dormant ethnobotany in turn sheds light on the pathways for ethnobotany to reemerge and the benefits of this reemergence as the world turns towards more localized, sustainable production systems consistent with the preservation of traditional ways of interacting with the land.
Chapter 1. Introduction to Dormant Ethnobotany

Ethnobotanical resources and knowledge were a prominent component of the North American landscape, economy, and culture for thousands of years. Ethnobotany is the “scientific study of dynamic relationships among people, plants, and their environment (Salick, 1995) ”. The deep knowledge of wild plants and their uses by Native Americans is well researched, and remains part of the traditions that live on in the continent’s indigenous communities. For example, today's Florida Seminole and Mikasuki tribes still rely on traditional herbal remedies passed down by their ancestors (Allen et al., 2002). Before the advent of industrial agriculture, ethnobotanical knowledge was also a necessity amongst European settlers and helped shape the structure of the rural economy (Jefferson, 1787). Knowledge and use of wild plants and local varieties of cultivars was a central aspect of homesteading, which generated its own type of economy based on local trading and exchange of labor outside the formal marketplace (Tozer, 2007). Reliance on locally grown and processed foods derived from wild plants and diversified agriculture was supported by an abundance of local mills, canning suppliers, and other economic infrastructure.

Globally, amongst indigenous populations, researchers have identified several overlapping reasons for the loss or devolution of indigenous ecological knowledge among contemporary populations (Wolff et al., 2001). Factors include schooling (Nabhan et al., 1993; Boster, 1984), occupation (Medin et al, 2002; Reyes-García et al., 2008; Godoy et al., 1998), market exposure (Brodt, 2001), ecological change (Ross, 2002), technological transformations (Atran et al., 2004), acculturation (Hill, 2004; Benz et al., 2000; Zent, 2001; Lizarralde, 2001), and change in value orientation (Ohmagari and Berkes, 1997). These factors reduce exposure to nature and undermine cultural support for the transmission of indigenous knowledge thereby abrading its preservation (Wolff and Medin, 2001; Godoy et al., 2005). This dissertation breaks
new ground by investigating the loss of local ecological knowledge in a developed world setting – the Bull Run Mountains of Virginia’s Piedmont region (Figure 1).

Figure 1. Location of the Bull Run Mountains (circled) in Virginia. Modified from Woodward and Hoffman (1991), and Fleming (2002), with permission.

Although it has not been systematically studied, I find that ethnobotanical knowledge in the Bull Run Mountains went dormant for many of the same reasons identified in the literature cited above (Wolff et al., 2001). In particular, I find that a combination of macroeconomic forces, such as new global markets and technological transformations, as well as cultural factors such as the stigmatization of the remaining pockets of land-based cultures played a role in the transition of ethnobotanical knowledge from an active to a dormant state.

The study of dormancy sets out to document that the loss of ethnobotanical knowledge in many areas is not complete and therefore lives on in the memories of the oldest among us, and survives in the local history and folklore. To the extent that this knowledge can be reacquired, it can reemerge to play a meaningful role in a society that now recognizes the value of plant based knowledge of traditional people and communities in restoring damaged ecosystems and pointing
the way towards more sustainable management of natural resources. As Ian Davidson-Hunt (2000) eloquently stated, “ethnobotanical knowledge is what we bring to the meeting place where those people interested in discovering, recovering and knowing local ecosystems, in an attempt to restore both cultural and ecological resilience and integrity of those places, gather.” In such situations, it can be viewed as dormant, and not dead. This dissertation develops and applies this notion of dormant ethnobotany.

Even as researchers document dynamic use of plants in remote areas they conclude in their research that there is evidence of dramatic loss of plant knowledge taking place (Luoga et al., 2000). As previously noted, often cited are a variety of observed social and economic reasons linked to the generalizations associated with the repercussions of globalization and technological advances (Davis, 1995; Stevens, 1997). Globalization in trade of goods and services and technological advances has replaced much of the need to interact directly with naturally occurring plants in local environments out of necessity. I propose the term “dormant ethnobotany” for this kind of ethnobotanical relationship.

Dormant ethnobotany is a new concept developed and presented in this dissertation. I propose the following definition: dormant ethnobotany is the study of relationships between people and plants that are inactive, but nonetheless still alive in memories, the historic record, and folklore and thereby capable of reemergence in support of the transition to a more sustainable society. Currently, the peer-reviewed and published literature is dominated by dynamic ethnobotanical studies (e.g., Prance et al., 1987; Lebbie and Raymond, 1995; Sheika et al., 2002) and the concept of dormant ethnobotany, plant use in decline and relegated to memory and written documentation, has not been extensively explored.
Dynamic ethnobotany refers to the complex, active relationships maintained between plants and people in certain communities of people, most often indigenous peoples located in remote areas. Ethnobotany is rooted in antiquity, but still a dynamic contemporary science with tremendous importance for the future (Shultes and Reis, 1996). Jan Salick curator of Ethnobotany for the Missouri Botanical Garden, defines ethnobotany as the “scientific study of dynamic relationships among people, plants, and their environment” (Salick, 1995). She notes how ethnobotanical research objectives have changed over time from simply cataloging plants, their preparations, and their uses, to documentation of more process-oriented skills, such as cultivation, domestication, and indigenous conservation of plant communities.

It is hard to quantify the exact stage of dormancy in any given situation, thus “dormancy” is used metaphorically to describe a reduced or limited level of plant knowledge within a community. From a historical perspective, it is apparent that dormant situations occur when cultural norms have changed, based on a variety of complex reasons. The study of dormant ethnobotany has the potential to understand this trend more intimately to identify the causes and the effects of this global trend.

Three specific time frames have been defined in the study of dormancy. They are the pre-dormancy era (dynamic), the transition period, and dormancy. The term dormancy has been consciously chosen over the use of the term extinct because the study of dormancy takes place when the knowledge of how to use plants is stagnant in the active sense but remains dormant in story and memories. The core essence to the study of dormancy is thus a road map to understanding the process by researching the internal and external forces that cause dormancy of plant use.
Areas of dynamic interaction are turning towards a state of dormancy, yet no clear term has been applied to this phenomenon. Development of the concept dormant ethnobotany for academic inquiry will prove to be very useful and presents an opportunity to expand the field of ethnobotanical inquiry. Disciplines that share similar academic overlap are a valuable source of inspiration when charting new territory in the study of specific geographic regions. In the development of the concept of dormant ethnobotany, fields of inquiry that are critical to this study are local history, folklore, and ecological studies.

The study of dormant ethnobotany addresses three significant gaps in the ethnobotanical literature. The first is the lack of ethnobotanical studies in industrialized nations among a non-indigenous group of people. In a review of 34 studies that were focused on individual ethnobotanical knowledge, the researchers’ found that the majority was based on indigenous populations in Latin America (Reyes-Garcia et al., 2007). It was found that researchers have given more attention to indigenous peoples (71%) than non-indigenous (21%) (Reyes-Garcia, et al., 2007). Furthermore the geographical location of the reviewed 34 studies revealed that none had taken place in a developed nation. The results were as follows: 70 % took place in Latin America, 21% in Africa, and 9% in Asia.

Researchers have argued that ethnobotanical knowledge emerges from the interaction of a given culture or society with a local biophysical environment (Warren and Rajasekaran, 1993). Some prefer to restrict ethnobotanical studies to aboriginal, pre-industrial peoples and their relationships with plants, “but this definition does not recognize the complex relationships and interdependence between plants and modern societies of all types” (Turner, 1995). As such, some have suggested broader definitions of ethnobotany to encompass plant use and knowledge by modern communities. This point of view recognizes that ethnobotanical knowledge is not
restricted only to indigenous peoples or only to developing countries. Indigenous groups possess ethnobotanical knowledge developed through generations of interactions with the local environment (Brookfield and Padoch, 1994), but similar knowledge has been found among non-indigenous groups such as farmers (Pieroni, 2001). Researchers have also argued about the importance of ethnobotanical knowledge for rural people of industrialized countries (Pieroni, 2001). Thus, I feel that the study of dormant ethnobotany fits this need to look at ethnobotanical knowledge in a rural industrialized area that is not populated by indigenous people, such as the Bull Run Mountains of Virginia.

The second gap is the lack of qualitative approaches to balance the predominant use of quantitative methods in ethnobotanical research. Galeano (1993) in her study of trees in Choco, Colombia, stated that quantitative methods dominate published ethnobotanical research. Quantitative inquiry typically involves gathering data in the present time, which limits the ability of the research to look at what is happening over time, thus allowing the inquiry to take on a perspective that is multi dimensional. Qualitative research allows for more discourse; it broadens the influence of inquiry. Qualitative inquiry is more flexible, allowing the research to address the subtleties of how knowledge shifts and changes and how this shift in knowledge is reflected in the local cultural and ecological landscape. Since these questions are rarely studied in ethnobotany, qualitative methods are hardly ever used in published literature.

The third gap entails the general lack of ecological data as a component of ethnobotanical field studies. Ian Davidson Hunt (2000) writes about the need for a more holistic approach to ethnobotany in what he coins “ecological ethnobotany” following the path established by ethnoecology. Ethnoecology, conceived by Harold Conklin (1954), is defined as a holistic integrated approach to understanding local ecological knowledge, using concepts and methods of
diverse scientific disciplines. Wade Davis (1995) pointed out that the field of ethnobotany is often criticized for lacking theoretical content that unifies other scientific disciplines and that it has suffered in academia perhaps because of a lack of orientation and integration. Integrating ecological studies allows for a larger context to the study of ethnobotanical knowledge. Ethnobotanical knowledge has significant implications for changes that take place in the local ecology. For this case study ecological studies will be used to validate change in plant use, and demonstrate ways in which the decline in plant use has affected the local ecology.

The significance of dormant ethnobotany can be understood from a variety of perspectives, or frameworks that shed further light on the concept, its causes, and consequences. One of these is the socio-economic perspective. In this perspective, dormant ethnobotany can be viewed as a loss of human capital necessary to the survival of homesteads in an era when plant use and knowledge was a necessity. Knowledge and use of plants was essential to household production, but also conferred social benefits in the form of pride, sense of community, and self-sufficiency. Ethnobotanical knowledge and use also had important ramifications for the pattern of production and distribution of goods and services at a regional scale. Its dormancy, then, has had a significant effect on the structure of the rural economy.

Another important perspective is cultural. In accordance with the standard classification established by Hofstede (1991) community culture manifests itself in different ways and different levels of depth, including folklore and sense of place. The definition of folklore is, “the traditional art, literature, knowledge, and practice that is disseminated through oral communication and behavioral example” (Noyes, 2004). The belief in plant knowledge as power and the special status of those who held this power are part of the folklore that is passed on from one generation to another in traditional communities. From the folkloric perspective,
then, dormant ethnobotany signifies a decline in the perception that the natural world and those who understand it are animated and sacred. It has been documented that in regions where the local community deems natural areas sacred such areas are better protected than areas where people have lost any sacred connection to the landscape (Byers et al., 2004). People’s connection to the land is often well illustrated in local folklore through name-place legends, and legendary figures. Furthermore sense of place – a deep familiarity with one’s geography and its history - is also linked to cultural manifestation that is derived in part from experiences with plants.

Yet another critical perspective is ecological. The intimate interactions between traditional peoples, plants and their environments had profound influences on the composition, and succession of vegetation communities, as well as the abundance and diversity of individual plant and animal species. Of particular significance were the effects of prescribed fires, foraging, and intensive land uses such as agriculture and forestry. Dormant ethnobotany, then, represents a withdrawal of these disturbance factors that can be viewed as both beneficial and adverse from ecosystems that were once relied on extensively for the plants they supported.

The remainder of this dissertation is organized as follows. In Chapter 2, I make the case for mixed methodology as the basic research approach for dormant ethnobotanical studies. The very nature of dormant ethnobotanical knowledge necessitates the use of multiple methods to excavate its history. Historical research, folkloric research, qualitative interviews, and ecological studies can all play a role in combination, but may be limited if applied individually. Dormancy is further explored as the study of the past as it relates to how plants played a significant role in the life ways of homesteaders. Furthermore multiple methods help frame not only what was happening in the local study area but also what was happening in the historical and economic context of the broader region.
In Chapter 2, I also introduce and explain the rationale for the case study. My case study is set in the Bull Run Mountains of northern Virginia and focuses temporally on the mid-1940s to mid-1950s. The unique geography, biology, conservation status, and documented history of human use and settlement make this an ideal geographic on which to focus. Additionally, I address the reasons and benefits for focusing on a small geographical area for the spatial context of this case study.

The focus of Chapter 3 is to establish the critical transition period. The temporal focus of the case study begins with a discussion of the Great Depression (1929 to early 1940s). Then the time frame of World War II (1939-1954) and the Post-War Era are discussed in relation to the transition period from dynamic to dormant ethnobotany in the Bull Run Mountains. Though the transition to dormancy takes place over time, amidst several complex factors, I identify the transition period as the 1940s-to-1950s as this is the time period where the generation of those growing up in the pre dormancy era begin to have children that are born into the community where the role of plants has changed dramatically. Plants are no longer as relevant to survival during this time period.

Chapters 4, 5, and 6 form the heart of the dissertation. In these chapters, dormant ethnobotany is explored from the socio-economic, cultural, and ecological perspectives by grouping the results of historic research, folkloric research, qualitative interviews, and ecological field studies into these broad themes. At the end of each of these chapters, I suggest what each perspective tells us about the concept, causes, and consequences of dormant ethnobotany in the Bull Run Mountains.
In Chapter 7, I summarize my results and locate the study of dormant ethnobotany in the broad research agenda moving forward in support of the transition to a sustainable society. I make eight key findings about the significance of dormant ethnobotanical research, how it should be conducted, and its relevance to sustainable development. The concept of sustainable development is reviewed with particular focus on the role of traditional ethnobotanical knowledge in adaptation to changing environmental conditions. I conclude by proposing a research agenda to advance the study of dormant ethnobotany as an important sub discipline within the field.

Dormant ethnobotany provides fertile ground for researchers across multiple disciplines. It can help conservation biologists, anthropologists, sociologists, and others interested in preserving Local Ecological Knowledge (LEK) understand the importance of dormant ethnobotanical knowledge as human capital, an element of social cohesion, and a past disturbance factor maintaining ecological communities on the land. The study of dormant ethnobotany can provide an important supplement to the study of active ethnobotany in regions of the world where signs of the transition are becoming apparent.
Chapter 2. Research Methods

The concept of dormant ethnobotany in general breaks new ground by addressing the critical transition period of ethnobotanical knowledge from active use to one that largely resides in memory, the historical record, or folklore. Moreover, the study of dormant ethnobotany in the Bull Run Mountains in particular presents a unique research challenge due to the inability to get a complete picture of ethnobotanical knowledge from any one source. Because I am introducing a new research topic in a setting with limited historical records, I relied on multiple sources for this case study: folkloric, historical, and ecological research as well as in-depth interviews with long time local residents. I then drew from aspects of a mixed methodological approach that engaged the use of triangulation from relevant perspectives to establish the time frame to focus the transition from active use of use of plants to a state of dormancy.

2.1 Mixed Methodology Approach

The field of mixed methodology—sometimes referred to as the “third methodological movement”—arose out of the controversies and debates over the relative merits and drawbacks of emphasizing either quantitative or qualitative methods in social science research as well as the tension between applied and theoretical approaches (Tashakkori & Teddlie, 2003). Greene et al. (1989) evaluated 57 mixed methodology studies conducted in the 1980s and came up with five distinct purposes for using mixed methodology. The first purpose he identified was triangulation, seeking a convergence of results. The second is complementarity, or the overlapping of different facets of phenomenon. The third purpose is initiation, the process of discovery, thus allowing for fresh perspective. Sequential development is the fourth purpose, resulting in one method informing the next. Last is the expansion of adding scope to the research at hand. Though I did not employ mixed methodology specifically I did use multiple methods that are in line with several of the purposes mentioned such as triangulation and additionally the overlapping of
different facets of the phenomenon of dormancy in regards to ethnobotanical knowledge. Mixed methodology and the use of multiple methods has been used extensively in recent years to solve practical research problems that address concerns in regards to human and plant-based resources.

For example, in their study of food insecurity in India, Chung et al. (1997) implemented a complementary mixed method approach aimed at developing both qualitative and quantitative indicators to help identify the population that would most benefit from food aid programs. Quantitative data were gathered from household-level interviews to fill the void in national level statistics on diet and income deemed too “cumbersome” for practical use in targeting food aid. The qualitative dimension of the research developed ethnographic case studies of at risk households, participatory mapping of vulnerable households within a community, food charts and seasonality charts. As another example, a study that looked at the importance of plant resources extracted by inhabitants of the Peruvian Amazon flood plains concluded that a combination of methods provided more detailed and profound results than using methods separately (Stagegaard et al., 2002). In this study both qualitative and quantitative methods were employed through forest surveys, structured interviews, and household surveys.

From a methodological point of view, the study of dormant ethnobotany necessitates an interdisciplinary methodological approach to answer many of the questions raised by the general line of inquiry. For example:

- What historic, economic, social and ecological factors contribute to the decline in ethnobotanical knowledge in a specific region and how are these factors intertwined?
- How does the decline in ethnobotanical knowledge influence the local ecology?
- How is this decline reflected in the history, and social elements of those who live in the region or community?

The definition of dormant ethnobotany, where the connection between plants and people is in a state of minimal activity and the knowledge of past uses of plants for day-to-day living
lies in personal stories, books, art, and archeology, crosses over several disciplines of academic inquiry. Its base components lie in three fields of academia: “dormancy” represents the study of history, “ethno” is rooted in ethnology, and “botany” finds its home in the fields of both ecology and conservation biology. On closer inspection, these base fields, in turn, necessitate investigations into related aspects of sociology, economics, cultural identity, and landscape ecology. When these areas of academic inquiry cross over one another, each component is informed and enriched.

Because the story of dormant ethnobotany in the Bull Run Mountains cannot be told from any single disciplinary vantage point, I based the study in part on a hybrid mixed methods approach. Instead of using a variety of methods to address the same question in a sequential format where each new method is then strategically designed to uncover further questions, this study used the various methods in synchronicity. The methods for data collection were carried out overlapping and informing the process over the course of the research. Therefore I set out to explore ethnobotanical knowledge using a mix of approaches, historical research, qualitative interviews and ecological data from historical field studies and current vegetation sampling.

Data collection for this case study began with research that was relevant to the local history of the Bull Run Mountains in Virginia. Research took place at regional libraries and historical societies, where historical documents, local papers, and historical maps were located. I began compiling historical research beginning in 2002. The following is a list of those places where local historical research took place: Aldie Mill, Fauquier County Historical Society, Bull Run Regional library, and the Thomas Balch Library. Since the Bull Run Mountains are situated where three counties converge it was important that I locate the historical hub of Fauquier, Prince William and Loudon counties in Virginia (Figure 2). Furthermore, I used data that were
based on county records and statistics such as population growth from Prince William County and farm data from Loudon County. In gathering data I have noted to which county the information was cited.

![County Map of Virginia](https://example.com/virginia-map.png)

*Figure 2. County Map of Virginia. Map demonstrates that the Bull Run Mountains (circled in yellow) encompasses Fauquier, Loudon, and Prince William Counties.*

Folklore informing this study was collected in the Bull Run Mountains during the Virginia’s writer’s project, which took place from 1937 to 1942. These collected stories based on interviews were deposited at the Albert and Shirley Small Special Collections Library at the University of Virginia. Data collection additionally included published research on folklore of mountain life in Virginia and historical newspaper articles relevant to local folklore.

Finally, I uncovered historical interviews archived at the Aldie Mill taped by Ellen Percy Miller in 1997 of four long time Aldie residents, described below. Since the closing of the Mill and its subsequent restoration, local historian Ellen Percy Miller taped several elderly members of the local community and deposited these tapes along with other archived records associated
with the mills operations. These interviews were conducted to document the role of the mill in the local community as well as its history from the perspective of the miller and local farmers. These historical interview tapes complemented my designed active interviews of six additional informants.

2.1.1 Qualitative interviews. My use of the term ethnobotany in the study of the Bull Run Mountains deals with all ways in which plant use was important in the lives of those living in the Bull Run Mountains including gardening, local agriculture, medicinal plant use, foraging of native plants, timber harvest, and gathering materials for crafts. In this study, ethnobotanical research includes both garden and nature lore. This included those plants that were important to the local economy due to historical circumstances, for example the demand for orchard grass for packing ammunition during WWII. It also includes how plant use affected ecological interactions in the broad terms of the landscape, termed ecological ethnobotany. Additionally, the use of plants also impacts one’s sense of place by developing and sustaining a connection to community through shared experience in collecting wild plants, gardening, storing and harvesting food, or appreciation for wild flowers. Plant use also contributed to sense of place by allowing one to relate to the seasons, observations of environmental changes, and renewable and sustainable use of resources. Thus the exploration of ethnobotany in the Bull Run Mountains is inclusive of all the specific uses and experiences listed above which extend beyond direct interactions with native local species. Nature lore and garden lore are both referred to in the case study and each provides insight into various ways ethnobotanical knowledge is relevant in the pre dormancy era. Garden lore primarily appears in the socio-economic perspective because of the significance that local agriculture, the homestead and gardening played in the region’s economy. Nature lore provides insight into the ethnobotany that is more endemic to the native
ecology of the Bull Run Mountains and therefore nature lore comes across more in the ecological and cultural perspective.

The quantitative research tradition has been historically strong in ethnobotanical studies focused on documenting botanical knowledge. Beggossi (1996) recommended that for a quantitative study a subject group of around 50 to 100 people that included a cross-section of the population is needed to validate the findings. In dormant situations, that sample size can be difficult to achieve. In exploratory conversations, it became apparent that only fragments of botanical knowledge existed among only a few older informants; therefore, it further validated the decision to use qualitative methods for the interview process, along with the need to understand ethnobotany in multidimensional perspectives. IRB approval for in depth interviews with selected inhabitants with relevant life experience was granted through the Antioch University New England in spring of 2008, and interviews were completed by the following fall.

I used an interview guide (Appendix 1) based on information from exploratory conversations. The open ended in depth interviews sought to explore social issues that have effected change in plant knowledge and use over time. Certainly, knowing the historical and ecological history led to a more informed question guide and dialogue. Thus the interview guide started with specific questions about plant use and then more abstract questions of why the use of plants has fallen into decline. “What” and “when” questions contributed to an understanding of which plants were of interest, such as what berries were picked, and when would they have been picked. “How” questions look at the transfer of knowledge, including how things such as vinegar were made, or how food was stored over the winter. “Why” questions inform the understanding of cultural values, such as why medicinal plants may have been harvested or why certain people worked various jobs.
The interview guide was made up of 50 questions. The interview process took anywhere from two to three hours. The questions were useful to initiate and guide the conversation but often the format was open ended. I visited with each informant several times before I conducted the taped interview. The purpose was to get to know each informant personally so that they would feel more comfortable with the formal taped interview. Knowing the informants personally helped me to guide the conversation in the direction most useful to my research. In regards to Jack Dawson I visited him on numerous occasions throughout the seasons, over several years, often just stopping by to visit.

The interviews were collected by tape recording and then transcribed. After the interview had taken place I also recorded my own observations, thoughts and reflections about the conversations. One of the participants, Jack Dawson, has difficulty hearing, and a very strong accent that was difficult to transcribe from tape, so I decided in my last meeting with him to take with me a copy of the interview guide that was printed in large format. With this in hand, Jack was able to read my questions himself, and as he answered them, I took notes. This was very helpful to keep the conversation focused and useful to the final transcription.

I gathered qualitative interview data from two separate sources, the first being active original interviews of the six informants described below. For these interviews individuals were identified that have a long history in the Bull Run Mountains, and would have been witness to the time period of the 1940s as children or young adults. Through initial conversations conducted in 2007, six individuals were asked to participate in a series of qualitative interviews. They were (1) Jack Dawson, (2) his sister Elizabeth Rachel McClaghty, (3) Mr. and (4) Mrs. Merial Partlow, (5) Sara Douglas, and (6) Mary Stewart. All of them currently live in the Bull Run
Mountains, except for Jack’s sister Rachel, and have a family history that goes back several generations, and represent diverse aspects of mountain life.

It was very difficult to identify individuals that were still living that met the criteria of having a long family history in the Bull Run Mountains, the experience of living through the 1940s, and that were willing to be interviewed. Certain individuals passed away before they could be formally interviewed, and some individuals that I contacted chose not to be interviewed. Thus I feel very lucky that I was able to find and interview the six individuals that represented diverse life experiences.

The Dawson family represents three generations that lived off of the Bull Run Mountains’ woodland resources. Jack Dawson is the last of his family to live in the mountains, still occupying the house he was born in. Jack lives a simple life, like his grandfather, who was a basket maker, and his father, who cut timber as well as gathered wild herbs to sell. Jack’s one living sister, Elizabeth Rachel McClaughty, lives in a nearby town and remembers life growing up in the mountains. Jack Dawson’s family home is located in the heart of the Bull Run Mountains near the headwaters of Hungry Run, located in Fauquier County.

Mr. and Mrs. Merial Partlow are the last of the Partlow family still living in the town of Aldie at the Northern end of the Bull Run Mountains, located in Loudon County. They have owned and operated the general store that Mr. Partlow inherited from his father to the present day. Mr. Partlow has a passion for identifying spring wildflowers and for local history. Mr. Partlow is valued in his community as a caretaker of local history, and a volunteer at Aldie Mill, which is now a museum open to the public.

Sara Douglas also knows the local history. She is a past school teacher in the town of Aldie and widow of Mr. Douglas who owned and operated Aldie Mill, one of two large
production mills in the Bull Run Mountains. The grain mill represents a very important historical link to the crops grown in the mountains and milled there. Mr. Douglas donated the Aldie Mill to the Virginia Outdoors Foundation before he died with the condition that it be restored to conditions necessary to be able to perform demonstration milling and made available to the public as a cultural and historical resource.

Mary Stewart is the last surviving elder of the Stewart family, which was critical to the establishment of two African American settlements in the Bull Run Mountains, Stewart Town and Bowman Town, located at the base of the mountain on the eastern side, which is Prince William County. Collectively the stories that these interview subjects can tell represent diverse experiences with plant life in the Bull Run Mountains.

My second data source mentioned previously in the historical methods were interviews discovered at Aldie Mill. After spending time reviewing these interviews, I uncovered four additional individuals to add to the source of interview material. These additional individuals are Mr. James Edwards (7), once the miller of Aldie Mill, Mr. Allen Gulick (8) and Mr. Cutis Poland (9), both local farmers, and Mr. John Tyler (10), a local resident of Aldie who lived into his late 90s. These additional interviews were important to the study because they highlighted the perspective of Aldie Mill and its relationship to the local community, economy and farmers. Together these ten individuals bring diverse life experiences to the interviews but yet all share the common experience of growing up in the Bull Run Mountains and through their similar age bear witness to the dramatic changes in relation to plant use and knowledge.

It is important to point out that 7 out of 10 of the informants are from the town of Aldie, because the town still has its post office, store, school, and mill, now a museum; therefore, it has individuals with generational ties that met the criteria. Beverly Mill closed on the southern end
of the mountain and so did the post office and store in the 1950s, therefore it was difficult to find members of this once thriving community to interview. Another factor that made it difficult to find informants was that the core ridge of the Bull Run Mountains is now part of a large protected area owned by the Virginia Outdoors Foundation. I did make attempts to contact individuals that had a long family history in the mountains but had moved away; sadly my attempts were unsuccessful.

To find models for evaluating the qualitative interviews as a component of this case study, I looked at oral history works such as *My Folks Don’t Want Me to Talk about Slavery* (Hurimence, 2003) and *We Lived in a Little Cabin in the Yard* (Hurimence, 2002). These two works were part of the 1930s Federal Writers’ Project that undertook a massive effort to gather the oral testimony of former slaves. The compiled stories represent a variety of situations, and they are raw, unedited, and powerful. Another example is the *The Way We Lived* (Margolin, 1981) a collection of California Indian stories. Margolin (1981) uses themes to organize the collected stories and then he adds his own commentary and insight. Two other very compelling works that follow a similar format are *The Voice of the Past* (Thompson, 1992) and *Like It Was* (Brown, 1988). These guides to writing oral histories offer similar advice to approaching the documentation of history through personal story. I found all the above-mentioned books thought provoking because personal stories make history more emotional and tangible. I decided to apply a similar approach by organizing the data gathered and then writing about the themes of plant use that emerge and how these themes relate to the decline in plant knowledge on a social level. This process of analysis in regards to the interview data is further explained in detail along with the interview guide (Appendix 1). The analysis of the interview data resulted in a several quotes that were then used in the three perspectives. The highlighted quotes then tie personal
experiences specific to the region of the case study to the broader socio-economic context of the times.

2.1.2 Ecological studies. To further explore the phenomenon of dormancy, I examined how this shift in botanical knowledge is linked to the ecology of the Bull Run Mountains. The methods used to look at ecological change in the Bull Run Mountains are based on historical research, past and present ecological studies, conservation history, interview data that are specific to interactive ecological diversity such as foraging and fires.

I identified the 1940s as the time period shift that dynamic to dormant plant use took place, and this is the focus of my case study. This shift is evident due to the meticulous observation from a prominent botanist and naturalist, H.A. Allard (1880-1963), who was conducting research in the Bull Run Mountains during this time. H. A. Allard was a naturalist at heart. He was deeply driven since childhood with a passion for the wonders of nature, documented by the fact that he saved his journals from when he was a young boy. He was born in 1880 in Oxford, Massachusetts, and grew up on a New England farm. He graduated from the University of North Carolina in 1905. Ten years before he died, he presented the Southern Historical Library at the University of North Carolina, Chapel Hill with his diaries, autobiography, articles, field notes, and correspondences. His papers consist of 21 boxes of material, mostly containing hand written notes taken from the fieldwork he carried out throughout his life.

“The Vegetation and Floristic of the Bull Run Mountains,” by Allard (1943), is the most comprehensive study of all his publications related to the Bull Run, summarizing years of collecting and observations. Allard not only published a detailed flora, he also deposited his herbarium collection at the National Herbarium in Washington, D.C. Furthermore, he kept
extensive journals, and he deposited these journals at the University of North Carolina, Chapel Hill, where they have been kept in the archives department of the Southern Historical Library. From his observations and documentation it becomes apparent that people living in the mountains were shifting away from farming and subsistence living in the 1940s. I conducted an extensive assessment of Allard’s published studies published and his journals. Allard’s work provided an ideal record from which to discuss a more recent plant ecology study by Gary Fleming (2002).

Fleming’s (2002) study was aimed at providing a detailed classification for the plant communities of Bull Run Mountains using quantitative methods. An ecological community is defined as an assemblage of co-existing, interacting species, considered together with the physical environment and associated ecological processes that usually recurs on the landscape (DCR, 2010). This specific study restricted itself to natural communities, those that have experienced only minimal human alterations or have recovered from anthropogenic disturbances under mostly natural regimes of species interactions and disturbances. In the case of the Bull Run Mountains, the chosen study areas were in mid-to-late succession stages of recovery from some form of human disturbances, such as agricultural, and logging. Early successional areas that had experienced recent disturbance, or highly modified habitats such as fields, roadsides, and plantations forests were excluded from the study.

The study itself seems extremely technical, but fortunately I had the opportunity to assist at several stages of the study, beginning with the planning that took place in the selection of the location of the 72 plots used in the study in year (Figure 3). This process was based on talking with those familiar with the Bull Run Mountains, looking at aerial photography, maps depicting
topography, geology and soil. The field plots were selected so that the locations could capture both homogenous vegetation within plots and a wide range of compositional variation applied across the larger landscape of the Bull Run Mountains. This was accomplished by choosing the plots that were well distributed across geological substrate, aspect, elevation, and local topography. I believe due to time constraints and limited staff the plots were preselected based on the criteria just mentioned versus random selection so that the data from the study could be maximized considering the allotted time and staff provided by the Virginia Department of Natural Heritage. Furthermore the criteria for the plots and the methods were and are the standard policy set by the department to create a uniform way in which all studies conducted in the state that are a part of the plant communities project for dedicated natural areas are currently conducted. The methods used to survey the plots were based on the releve method (Peet, et al., 1998), and following a standard procedure set up by Virginia’s Department of Conservation and Recreation and Department of Natural Heritage. From the spring to fall of 2001, I was able to accompany Gary Fleming and assist in the data gathering aspect of this study. Though the scope and methods employed by Allard and Fleming are different, they are both extremely extensive in the evaluation of the plant species and community dynamics. The two studies provide a platform from which to discuss how the study of dormant ethnobotany is relevant to ecology and conservation issues of management in the mountain. These two studies provide a unique situation from which to discuss the shift from dynamic to dormant and how this is relevant to changes that have taken place in the local ecology over the past 50 years.
2.1.3 Triangulation. Triangulation as a research method originates from the approach to surveying in the nautical process in which two points and their angles are used to determine the distance to a third point and was used by Denzin and Lincoln (2005) and applied to social research. In this regard triangulation in the context of social inquiry is the combination of data sources to study the same social phenomenon. Denzin and Lincoln (2005) described four different types of triangulation: data, investigator, methodological, and theory. In this dissertation I use data and methodological triangulation types to establish the critical time period when the transition from active to dormant ethnobotany took place in the Bull Run Mountains.
The triangulation of methods includes qualitative interviews, historical records, and comparative ecological field studies. The triangulation of data from these three methods helped to establish this period as the mid-1940s to mid-1950s, generally known as the “post-war” era. In my concluding chapter, I present a timeline to consolidate these various data points to more clearly illustrate the triangulation technique and show how a variety of forces working together over a long-time period contributed to the transition from active to dormant ethnobotany in the Bull Run Mountains.

2.2 Case Study Selection

In selecting the Bull Run Mountains as a case study to explore dormancy it was obviously important that the location for the case study be within a developed nation. Furthermore it was desirable to choose an area that had protected status so that the research could then inform future conservation policies and education.

Located only 35 miles west of Washington, D.C., the Bull Run Mountains are the eastern most mountain range in Virginia. The mountains are the largest unfragmented natural landscape in Northern Virginia, about 12 miles long running north to south along its ridge. The mountains represent a unique divide of the piedmont region to the west and the coastal plains to the east. The mountains therefore are also a meeting ground of both mountainous and coastal plains species. Two state-listed rare groundwater amphipods and seven state-listed species of odonata were discovered relatively recently (Natural Heritage, 1999). The presence of these aquatic species is not surprising since the mountains have many forested seepage swamps, springs and streams that form the headwaters of two distinct watersheds, Goose Creek and the Occoquan, both sources of large drinking water reservoirs that supply northern Virginians. The region is also the eastern most range for the timber rattlesnake (Crotalus horridus).
The Bull Run Mountains reaches an elevation of 1311 ft. and is considered a monadnock, an isolated hill or range of hills resulting from the erosion of the surrounding terrain. Geologically speaking the mountains represent the largest exposure of metasedimentary rocks along the eastern flank of the Blue Ridge anticlinorium. This means that the rocks were formed through metamorphism, heat resulting from the collision of tectonic plates that began over 570 million years with the making of the Grenville mountain range. This by far predates the formation of the Appalachian Range, which occurred between 1.2-1.0 billion years ago. The large cliffs such as those at High Point and White Rock are exceptional features of the Piedmont Region, and provide geologists a rare opportunity to date the geological history of the area. For locals the geology was an important past resource noted by the many small quarries where mostly quartzite was harvested for building material, such as that used in Beverly Mill. For historians the small quarries are of interest as they are the battle sites of many small skirmishes that took place throughout the Civil War.

The cliffs that can be seen from a distance, and are the hallmark of the mountain range, consist of white quartzite surrounded by boulders of Catoctin greenstone. The mountains were identified and recommended for dedication as a natural area due to the diversity of intact woodland plant community types, and several state-listed, rare species all found in such a small area. Additionally, the Bull Run Mountains have been recognized as a high priority for natural area protection and conservation because of the geographical proximity of the Bull Run Mountains to the densely populated Northern Virginia Region. This view has been shared since 1965 when the state of Virginia released *Virginia’s Common Wealth: A Study of Virginia’s Outdoor Recreation Resources and the Virginia Outdoor Pan for Conserving and Developing Them For the Lasting Public Benefits*, to which the Bull Run Mountains were listed as highest
conservation priority, stating “This attractive mountain terrain is closer than any similar resource to the metropolitan area” (ORRRC, 1965).

In May 2002, the Bull Run Mountains, in central Virginia, was formally dedicated as the 34th State Natural Area Preserve, making it an ideal place for studying the concept of dormant ethnobotany in the United States. There is a conservation history that goes back to the 1960s, when a small group called the Natural Areas Foundation was formed and began purchasing property in the Bull Run Mountains for the purpose of conservation. The land that had been purchased in the 1960s was given to the Virginia Outdoors Foundation (VOF), a state agency whose primary focus is placing land under conservation easements. VOF currently owns 2,500 acres encompassing the Natural Area Preserve, and holds an additional 2,000 acres in conservation easements, on privately held land. VOF’s holdings in the mountains are co-managed with the help of the Virginia Department of Natural Heritage (Figure 4). VOF leases a 500-acre tract to the Bull Run Mountain Conservatory, a group that manages public access and environmental education programs. VOF also restored the Aldie Mill, a historic grain mill on the edge of the north side of the mountain, and in 2005 the mill was given to the Northern Virginia Regional Park Authority. On the South edge of the Mountains is Beverly Mill, managed by Turn the Mill Around, a small organization that has taken on the stabilization of the mill after a devastating fire in 2000. The Outdoor lab is a non-profit organization whose mission is to manage 311 acres on the southern portion of the mountains, where it operates its environmental education program for Arlington County public school groups. With five public organizations engaged in the mountain’s conservation and education of biological resources, the time is ripe for conducting historical and cultural research in ethnobotanical knowledge.
There are also ongoing conservation efforts organized by the Virginia Outdoors Foundation, and the local community to create a biological corridor by connecting protected areas of the northern and southern regions. This concept would also allow for the development of a “mill to mill trail” that would link Aldie Mill to Beverly Mill. This trail would be around 10-12 miles along the ridge top of the Bull Run Mountains (Figure 5).
Figure 4. Map of Conservation Area in the Bull Run Mountains. Map illustrates land owned by Virginia Outdoors Foundation, land under easement, Potential gift area.
Figure 5. Photo of Bull Run Mountains. This photograph shows the white cliffs of the Bull Run Mountains. (Photo courtesy of Gary Fleming.)

One could argue that it would be better to look at a larger region such as the Appalachia Region in general instead of such a small geographical area for this case study. In looking at research pertaining to folklore and landscape history, I found validation for the spatial focus of this case study.

Michael Hoberman (2000), in Yankee Moderns, points out that in the field of folklore, studies of small geographical regions are often overlooked. The definition of folklore is “the traditional art, literature, knowledge, and practice that is disseminated through oral communication and behavioral example”. Because of Hoberman’s interest in regional identity, he chose to study the Sawmill Valley of Western Massachusetts, an area of twelve square miles. Hoberman suggests, “Any convergence of landscape and culture can constitute a region.” I have applied this concept to the study of ethnobotany by focusing specifically on the Bull Run Mountains, a very small geographical region.

The chapter “Reconstructing the Colonial Environment of the Upper Chesapeake Watershed” in the book Discovering the Chesapeake, established three assumptions for uncovering a landscape’s history (Hofstra et al., 2001). The first is that an interdisciplinary approach that combines both the natural and social sciences is needed, because natural processes
often operate independently of human action. Hofstra et al. (2001) point out that humans have specific intentions in their action to modify natural processes but that nature often responds to human activity in unexpected ways. The second assumption is that to understand such a mutual interaction, the researcher must reach beyond traditional documentary sources used by historians. The third assumption is that research to reconstruct land cover is more effective at the local level of inquiry and at the smallest spatial scales. This is interesting in that, from a historical perspective, Hofstra and his co-authors recommend focusing on a small geographical area in order to research the history of the landscape, just as Hoberman (2000) sees the value in choosing a small region to research the folklore as a means to identify the relationship between place and regional identity. I have applied these guiding principles and chosen a very small geographical area to define my case study.
Chapter 3. Establishing the Critical Transition Period to Dormant Ethnobotany

Since the history of the Bull Run Mountains spans over 300 years of European settlement, and close to 15,000 years of human history it was important that a temporal focus be established for this dissertation. In fact, it makes sense to begin any study of dormant ethnobotany with this step, since in almost any other setting imaginable the history of human uses and interactions with the land and vegetation spans a similarly vast period of time. The temporal focus was established to specifically look at the time period of when the shift from dynamic to dormant plant use took place. Establishing this transition period in this dissertation is necessary to understand the nature of “what changed” in the shift from dynamic to dormant ethnobotany. By establishing the critical transition period here, in this chapter, I am able to provide a historical “dividing line” (albeit a thick one) to describe how ethnobotany changed from the socio-economic perspective (i.e., patterns of production and exchange, community stability, division of labor), the cultural perspective (sense of place, folklore, values) and the ecological perspective (land use, biological diversity, disturbance patterns) in the Bull Run Mountains in Chapters 4, 5, and 6, respectively.

From initial conversations and some limited historical research it became apparent that the time period encompassing the Great Depression, World War II, and Post-War Era stood out as an important time period to consider. My investigations in this chapter confirm this initial intuition. By applying the triangulation method and researching broad economic and social trends during this time period, historical records related to the Bull Run Mountains, qualitative interviews, and ecological field studies I conclude that the period of the mid-1940s to mid-1950s was in all likelihood the period when ethnobotanical knowledge in the form of both garden and nature lore as well as widespread use of plants in the Bull Run Mountains went dormant. My interviews lend original data, and so they are emphasized. The ten subjects whose interviews
were included in this study were all born between the time periods 1910 to 1930. They lived through the Great Depression, World War II, and a change in life style that involved many new technologies aided by infrastructure provided by the Rural Electrification Act (REA). They were also witness to changes brought on by outside forces such as the state and federal farm policy and REA that came out of government programs due to the Great Depression, new technology, most notably the “deep freeze”, the end of WWII, and changed demand for various agricultural goods as global markets opened up.

As shown below, interview data confirm this time period from quotes that capture memories of how plants were significant in daily life, and highlight change in rural life that came with electricity, farm policy, and historical events. To organize this chapter, I’ve divided the discussion into the three major historical segments: Great Depression, World War II, and Post War, and include facts and observations within each period that are derived from one or more of the major research methods being employed.

3.1 The Great Depression
The Great Depression sheds light on the dormancy concept in three important ways. First, it demonstrated how dynamic ethnobotany helped homesteaders who had this knowledge to weather the economic storm of the 1930s. Second, it set the stage for federal and state farm policies that would later have a dramatic effect on the local economy by creating disincentives for local self-sufficiency that were based, in part, on knowledge and use of local plants for food supply. Lastly, the Great Depression provided the funds and the manpower needed to bring electricity and the subsequent proliferation of household electrical appliances to rural America.
The Depression was a time in which the rural economy and the diversified small farms characteristic to Virginia demonstrated the importance of local economies, especially food production, in supporting communities to weather larger economic troubles. This is evident in how Mr. Tyler, long time resident of the town of Aldie (in the Bull Run Mountains) and oldest informant, described these times and the sense of pride local farmers had in bringing their harvest to the mill.

Then came the period of the Great Depression years when wages were very low and I took a job in 1933 at the A&P in Middleburg- the wage was 25 cents an hour. Social security took 3 cents. I thought that the 3 cents would never amount to anything. Actually, I am trying to live on that now. The mill was a busy place at that time, in particular. There was no electrical power in the area then, and people depended on the mill for their flour and all the other grain products they used. Farmers would come in with their wagons with grain and go back with some finished product. At that time the farmers took great pride in their teams, and lots of them had bells on and I’d hear those tinkling bells and would run to watch them. They depended on the mill entirely those years before we had other sources of power, and I always regretted seeing the waterwheels stop (Mr. John Tyler).

What is interesting about Mr. Tyler’s narrative is that it provides a graphic illustration of the two-sided nature of the economy during the Depression years. On the one hand, people are barely squeaking by in the formal market economy with extremely low wages and high unemployment. On the other hand, local food production continued on unabated as evidenced by the hectic pace of life at the mill. Resident Fred Barron’s account of what was happening in The Plains (another small town in the Bull Run Mountains) in the mid-1930s corroborates Mr. Tyler’s perspective:

The Plains was still thriving then. But we were buying coal oil from country stores, and driving up to gas stations that were hand-pumped. The Plains was a commercial hub for a large and prosperous agricultural region. People would drive in and buy feed and salt blocks, and haul produce in to be shipped off, as we did truckloads of Yorks, Staymens, and Ben Davis that would go from the Plains to England and Argentina (Evans and Gott, 1993).
For communities in the Bull Run Mountains, self-sufficiency in food production, based in part on knowledge and use of local plants, helped stave off the Depression’s worst effects. Both garden and nature lore played a role. Although the exodus of homesteaders from the Bull Run Mountains had already begun, field notes H.A. Allard during this period show clearly that wild foods from the mountain were still used by homesteaders and squatters.

The next field beyond after crossing a fence, this field somewhat lower and N.W. of the cabin formerly squatted in by the Riley’s in fall of 1936 until late autumn 1937. This cabin now vacant, the Riley’s having squatted in the old abandoned log cabin on the valley road on the left at the edge of the hill where the “huckle berries” were so abundant during the summer of 1937…This field with a fence row supporting all varieties of sassafras, locust, grape vine, etc. typical of such places (H.A. Allard, Fields Notes, November 21, 1937).

From the 1930s and leading up to 1948, Allard traveled to the Bull Run Mountains almost every weekend it seems throughout all seasons. The bulk of his research was on the dynamic process of succession on the landscape, a process that was driven to a large extent by human interactions with the land and their subsequent decline. It appears from Allard’s notes that he documented areas abandoned as early as 1910 to 1920, which was well into the process of succession, 40 to 50 years later. Writing in 1961 he observed:

Abandoned farmlands and pastures revert very soon to forest, but sometimes not until a clear-cut broom sedge phase has intervened. This grassy stage may persist as dominant cover for years, or young pines, cedars, locusts, persimmons, and tulip poplars may spring up almost simultaneously with the grass. Where the land has been long abandoned, old well-developed groupings of these species captured their ground 50 years or more ago, and there are fine stands of tulip poplar at least 50 feet tall, and large areas of almost pure locust stands 40 years old (H.A. Allard, 1961).

These observations would suggest that the transition to dormancy might have started in some parts of the mountains as early as the 1920s. But other observations document seasonal use of log cabins during the late 1930s and that some families moved to seasonal locations depending on what they might harvest such as berries. So it appears that during the Great Depression, dynamic ethnobotany was practiced to some extent in the Bull Run Mountains, and
it makes sense that during these hard times, families would turn to nature for subsistence whenever they could.

Self-sufficiency in the Bull Run Mountains during the Great Depression is also underscored by the relative unimportance of New Deal farm policies to this part of Virginia as compared with other regions that were less self-sufficient. The New Deal and the first Farm Bill were put into place during President Roosevelt’s term. The Agricultural Adjustment Administration (AAA) was established to oversee the program under the umbrella of the Department of Agriculture. Ronald Heinemann’s (1983) book on Virginia and the New Deal states that Virginia farmers received $7 million in payments. This placed Virginia at the ranking of 31st in the nation, a low ranking among other states such as Texas where farmers received $133 million in payments. This was in part because Virginia was not as dependent on one-crop agriculture. Another reason was that in Virginia politics the role of federal policy in state affairs was debated aggressively. Virginia resisted federal aid and the concept of federal involvement in farming affairs, and many rural farmers shared those concerns. Virginia at that time was a diversified farming economy with many subsistence farms that did not produce for out of state markets. It was estimated that 25.9% of farms were self-sufficient meaning that the family used 50% or more of their own production, Virginia ranked 3rd highest in the nation for self-sufficiency farms with the national average around 8%. These small self-sufficient farms were typical in the countryside after the Civil War. After the Civil War, the Second Battalion of Engineers United States Army set up at the base of Bull Run Mountains to hold extensive training exercises. A map of the area where this took place was made to assist in this exercise, dated 1904, that show the large fields that were cultivated in wheat and corn (Figure 6).
Figure 6. Maneuver Ground with Crops, 1904. Wheat is shown highlighted in blue and corn is shown highlighted in pink.

In addition to relatively high self-sufficiency in food, Virginia farmers also enjoyed a measure of independence from the effects of the Great Depression because of the more localized nature of finance. Gott (1987) noted that the Great Depression did not as dramatically affect local farms because farmers and businessmen had not invested in securities and the conservative local banks had not sent funds to New York to bail out speculators.

It was further south and west that large-scale farming took place and became vulnerable when prices began to drop dramatically at the start of the Great Depression. Farm policy was geared towards fixing the dilemma that large farms were facing. The farm policy that came out of the New Deal certainly helped stabilize the market and control prices at a critical time in the
American economy but small-scale farms were suffocated out of the economy in the process. No assistance was available to help small farmers compete with large subsidies geared towards the growth of large-scale agriculture. This is evident in the history of Aldie Mill, which stopped its flouring operation in 1932, in part because the larger companies—General Mills and Pillsbury—were able to make white bread that was cheap, fashionable, and available at the local store (Figure 7). White bread became accessible in part to new roller technology implemented in the Midwest that was effective in extracting the brown wheat germ from the kernel (Scheele, 2009). Thus small-scale farms were priced out of the new system, and people could afford to buy non-local products at a cost cheaper than locally traded commodities. This effect on local farm economy was a common theme throughout the United States. It is important to point out that the effects of farm policy took time to change the local economy and it was not just one policy but rather a multi-dimensional process that had long-term effects on how people lived.

Figure 7. Photograph of Aldie Mill. (Photo courtesy of Aldie Mill.)

Regardless, the role of U.S. farm policy in facilitating the transition to dormancy cannot be underestimated. Its primary effects were to subsidize large scale farming of a few commodity crops at the expense of local self-sufficient farms. By subsidizing large, centralized farms, farm policy undermined the cost effectiveness of local production for local needs. In the midst of the
Great Depression farm cash income in the United States declined to its lowest point in 27 years (Heinemann, 1983). This in part was blamed on overproduction that resulted in extremely low prices. Under this program baby pigs were slaughtered in large numbers and cotton fields were plowed under. The programs encouraged farmers to sign up to receive allotments, which reduced the amount of acreage farmed and therefore raised prices by a reduction in production. In Virginia these programs were geared towards cotton, peanuts and tobacco primarily, crops that were not grown in the Bull Run Mountains. Wheat would have been the only commodity that was a part of the program grown in the mountains and surrounding areas and only 12% of Virginia wheat farms participated in the government programs that would pay farmers not to grow the crops on their acreage depending on their allotment (Heinemann, 1983). Though these programs may not have affected Bull Run farmers directly, they did so indirectly in the years that followed in the form of cheap bread from the Midwest that displaced wheat grown and milled locally into flour. Eventually, this same process displaced many of the foods grown and processed locally in the Bull Run Mountains.

The third salient aspect of the Great Depression relates to the Rural Electrification Act (REA) that came into play in 1935. President Roosevelt was concerned that rural America was not receiving electricity because private companies found running rural lines too costly. The Depression seemed like the perfect opportunity to put people to work building the necessary infrastructure to bring electricity to rural America. In Virginia the REA was critical to the establishment of cooperatives that brought power to rural areas of Virginia. In 1934, only 7.6% of rural areas of Virginia had power, but by 1950, more than 90% of farms were electrified (Brown, 1980).
Electricity had a profound effect on the way people lived in their homes. Leisure and work no longer depended on daylight. Radio connected rural listeners to the larger world around them. Household appliances for women changed the nature of work around the home. The interviews conducted in the Bull Run Mountains retell the dramatic changes that came to mountain life with one dominant similarity—the reference to the ability to refrigerate and freeze food.

Certainly, the invention and availability of the freezer was not the only cause of a decline in ethnobotanical knowledge in the Bull Run Mountains. There were many factors but the use of the deep freezer is a very tangible item related to food that directly affected each household as electricity was brought into rural Virginia. The introduction of Freon expanded the refrigerator market during the 1930s including the separate freezers that became common during the 1940s and were popularly referred to as the “deep freeze”. Mrs. McCaughty, who grew up as a member of the Dawson family in the heart of the Bull Run Mountains, reflects below the significance in her opinion of the value of being able to not only just store food for the winter but to keep perishable foods cold:

Before we had the refrigerator food wasn’t kept that cool. People were accustomed to milk and other foods being warm. I think the refrigerator made more difference than not having the wood stove in winter (Mrs. Elizabeth McClaughty).

Mrs. McClaughty remarks underscore the point that while there were “big picture” factors influencing the transition such as farm policy, public infrastructure, global trade, and social shifts in perspective of poverty and wealth, they are less tangible from one person’s perspective in relation to daily life. The freezer eliminated the need to constantly prepare fresh foods and allowed for storage of processed foods from afar and replaced the need to plan as
intensely for family food consumption and availability. It also made it easier for food that came from outside the community to be transported and stored.

One compelling aspect of the historical record of the transition is its rapidity. Typically, the transition occurred during the course of the lifetime of those being interviewed. It is remarkable to note that ethnobotanical knowledge can fall into a state of dormancy so quickly, and thus in this case study it is very evident that 50 years later the effects are quite dramatic both culturally and ecologically. Below are two quotes that highlight the change that took place between the generations of those individuals that I interviewed in contrast to the lives of their children. One quote is again from Mrs. McClaughty, and the other is from Sara Douglas, who was a local teacher and the wife of the last owner of the Aldie Mill.

If it wouldn’t keep without canning it was canned. Not now. I put in the freezer, but when we had a garden well up until my husband died. He always had a big garden and I canned. Of course my kids don’t know how to do that (Mrs. Elizabeth McClaughty).

Well just about everybody in Aldie had a garden, we were in a competition of who would have the first tomato, but the folks canned tomatoes, beans, corn, lima beans and raised enough potatoes to last all winter and when I grew up we raised enough garden vegetables to last all winter. But later on my experience you got the deep freeze rather than canning them. We made pickles with cucumbers and we had different kinds of pickles: bread and butter, chow chow. There were berries around, wild berries everywhere. Blue berries grow wild and lots raspberries from the garden. My children when they come to visit remember picking black berries, so they come in blackberry season and then they’d can em to make pies with em in the winter or they make jelly with ’em. Some of the folks had rhubarb. We had asparagus too in the garden here after I was married and asparagus you could freeze that too and it will last through the winter (Mrs. Sara Douglas).

What these two quotes share in common is the link between one generation and the next. Both quotes mention how in their time people canned and, as Mrs. McClaughty says, “of course my kids don’t know how to do that.” While Mrs. Douglas’s children still help with blackberry picking and canning, it is during their visits and her narrative implies that this work represents a
nostalgic connection to the past for them rather than a necessary part of daily life. This suggests it only takes one generation to change behavior and dramatically shift how plants are used in daily life. Ethnobotanical knowledge is taught through actions based primarily on necessity, or better-said carries a value or purpose in the cultural setting. It may only take one generation to lose a skill or knowledge of a particular matter but the reasons for this shift are often very complex with several contributing events.

3.2 World War II

The mid-1940s to mid-1950s is pinpointed as this shift, in part because it is the time period in which those that were raised dependant on local resources begin to raise their children in the same community but now it is a rural homestead with electricity, and cheaper outside food sources. World War II is the last time local resources would be vital to the community, as the War ended in 1945, a whole new global network of trade, markets, technology, and culture drastically changed people’s day to day life in the Bull Run Mountains.

From the interviews, it is important to point out that World War II brought life back into the local farm economy, perhaps for the last time. Local products and victory gardens were well advertised and supported throughout the war effort. For farmers, one local product that was in high demand and helped many farmers financially was Orchard Grass (\textit{Dactylis glomerata}). Orchard Grass is a perennial cool season grass cut in May or early June, as farmers would call it “coming into head”. After the invasion of Denmark, which was the largest supplier of Orchard Grass to Europe and America, 17 counties in Virginia became the new source for Orchard Grass seed production, It was used for packing ammunition, artillery shells, small arms and rifles, Mr. Allen Glick, resident close to the town of Aldie and local farmer, confirms this in a statement he made during an interview:
During World War II the mill was going good and that time Orchard Grass was a big thing. The mill bought a lot of Orchard Grass and a lot of people sold enough Orchard Grass to buy farms and get out of debt (Mr. Allen Glick).

During the war there was a strong sense of community around getting by with what you had and rural people in the Bull Run Mountains were fortunate to have the farms they depended on to supply them with what they needed. Similar to the times of the Depression, local farms proved important items in times when foreign imports were cut off.

There were blackouts in those days when the sirens would wail and everyone had to cover all of the windows and turn the lights out. It seemed as if everything was rationed in those days, from sugar to shoes to tires. But the majority of people had a garden, cows and raised their own pigs so the shortages were not felt as much as they were by people in other areas (Mr. Allen Glick).

Another interesting native plant gathered in the fields, and important to the war effort, was milkweed (*Asclepias speciosa*). During America's colonial days the silken fibers were used to stuff pillows and comforters. This historical knowledge of milkweed’s properties came in handy when Kapok from Java, Indonesia, the main source of filling for life jackets, was cut off by the Japanese invasion. Because of its buoyant and waterproof qualities, milkweed floss was a perfect American substitute. A 1944 issue of National Geographic magazine shows a picture of 90,000 pounds of milkweed drying with the saying below, “to buoy up fighting men’s life jackets.” Wartime pamphlets encouraged children to gather milkweed. The slogan “Two bags save one life” summed up the main mission. The floss harvested from of milkweed pods would fill one life jacket. Milkweed floss was also used to line flight suits.

During World War II all of the mothers and young girls would meet in the upper story of Mr. Partow’s store and roll bandages for the wounded men overseas. We also saved all of the silver foil, tin cans, and the fluff from the milkweed pods for the war effort (Mr. Allen Glick).
3.3 The Post-War Era

As the war ended, the need for local products changed dramatically. Service men returned home and once again global trade markets reopened. Global markets for almost every conceivable good began to appear. This “supply side” phenomenon coincided with the evolution of a major new “demand side” phenomenon – consumerism, which cast participation in the market economy as a kind of patriotic duty and thereby led to the stigmatization of local foods, goods, and services produced informally by householders (Streich, 2009). After years of calling on Americans to be frugal during the war, the centerpiece of post-war economic strategy was to vastly increase consumption of goods and services. Campaigns emphasized the importance of the consuming public. Eventually, the entire economy was transformed. “Consumers” were identified and recognized as a separate, important, and powerful group. Consumerism became more than the pursuit of simple pleasures; it was a way of life and a duty to American society. Buying as many things as possible and as fast as possible was good for society as a whole, not just the individual.

Amidst the heady economic times of the 1950s, economist Victor Lebow suggested:

Our enormously productive economy demands that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction and our ego satisfaction in consumption. We need things consumed, burned up, worn out, replaced and discarded at an ever-increasing rate (Lebow, 1955).

Consumerism had a direct influence on household food production by stimulating the substitution of modern appliances and processed foods for local foods prepared in more traditional ways that maintained at least some connection to the land, plants, and people from where they came. “The American housewife experienced dramatic changes in the kitchen. Hotpoint’s new range, introduced in the 1950s, was advertised as ‘super automatic’ and could
bake, broil, grill, barbeque (like modern rotisserie appliances), and had the ability to fry fries in a special frying unit” (Streich, 2009). Processed foods were designed with these new appliances in mind, and meant a whole lot less time in the kitchen.

Consumerism severed the ties to local food production and distribution. Postwar consumerism turned against neighborhood grocery stores. Families from both rural and urban areas moved to the suburbs where ample open space for development and an automobile friendly infrastructure provided the ideal setting for proliferation of large supermarkets which today dominate the food trade (Witkowski, 1998). This migration spurred a population explosion in areas just outside the major cities, including Washington. The striking growth in population for Prince William County that began just after the transition period is shown in Figure 8.

Figure 8. Graph of U.S. Census Bureau statistics of Prince William County. This graph shows population growth that took place in the Post-War Era.
Swanson “TV dinners” and other fast foods began a food revolution while the producers of evaporated milk proclaimed their product as a “magical marvel.” These could only be offered in mass in the modern supermarket built to accommodate all those new families that began to populate Washington’s suburban fringe.

Globalization and consumerism together dealt a double blow to small-scale local production of food and plant based products. Structurally, this was reflected in declining local production capacity. In the Bull Run Mountains, local mills disappeared at an increasing rate. The two largest Mills in the Bull Run Mountains were the only mills still in operation after the war. Flour production had already stopped and cornmeal was Aldie Mill’s staple, and 1946 was one of the best years for the Mill (Scheele, 1996). The mill’s profit pendulum swung the other way by 1955, with the infestation of the Mediterranean fruit fly that ruined over half the cornmeal in the mill. Federal health officials were tough on inspections of the cornmeal for impurities, and the cost to upgrade the equipment was too cumbersome. In 1964, the mill switched to a tractor engine to run the mill, as did many small mills, before they eventually shut down. In 1971, the mill made its last bag of cornmeal. It was the last 18 water-powered mill then standing in Loudon and Fauquier County to close. This would be the end of an era that began in the early 1800s, when practically every stream that could carry enough water to support a mill thrilled as the community source for its most basic needs.

It is also important to note that Beverly, also known as Chapman’s Mill, that once stood on the southern end of the Bull Run Mountains, closed in 1951 due to harassment from the Virginia Health Department (Pers. Comm. Ellen). Walter Chrysler Jr. was the last person to own the mill in operation; he bought the mill in 1945 so he could make his own chicken feed. One of his hobbies was raising the “North Wales” breed of chicken at his nearby farm. It seems that
both mills, Aldie and Beverly (Figure 9), in their final days had shifted from human consumed products, such as flour and cornmeal, to animal feeds before closing. And ironically, it seemed that the financial costs of maintaining water run mills, along with the cost to make upgrades to meet new health codes, proved to be the final nail in the coffin for both local mills. They were iconic to the region.

Figure 9. Beverly Mill. This mill, also known as Chapman’s Mill, stood on the Southern end of the Bull Run Mountains. This photo was taken before the tragic fire (1998).

Taken together, these historical accounts point to the end of World War II as the critical point in the transition to dormancy in ethnobotanical knowledge as global products became more available, the effects of state and federal farm policy really took effect, and consumption of household appliances escalated. Electricity became available in rural areas and modern technology, such as refrigerators and television, became a part of home life. Additionally, the mid-1940s to mid-1950s is when the generational transition took place as those who were raised in a more dynamic plant-use environment began raising their children in new suburban settings, where one does not require by necessity to learn those plant based skills, such as foraging, canning, gardening, and farming.

From the foregoing discussion, it is clear the time dimension is key in developing the concept of dormant ethnobotany. The very definition of the word “dormant” implies an active or dynamic past. To fully understand dormant ethnobotany requires identification of the critical
period of transition from dynamic to dormant ethnobotany so that salient economic, social, cultural and ecological aspects can be described in “before and after” terms. This point seems intuitively obvious. Nonetheless, it underscores the importance of honing in on this time period as a way to organize dormant ethnobotany research. For the Bull Run Mountains, my historical research and interviews suggest the mid-1940s to mid-1950s as the transition period. In the course of my research, another aspect of dormancy came to light—the rapidity of the transition. Regardless of how important ethnobotanical knowledge and skills are to a local economy, they can all be lost in as little as one generation.
Chapter 4. Dormant Ethnobotany from the Socio-Economic Perspective

Electricity on the farm
Back in the mountains to our surprise
The electricity line has come through the pines
Through the mountains and the hillsides too
It looks too good to be true

They chopped and chopped and hit a many hard lick
To put the line where they saw fit
They cleared the way over the fields
Over the rocks and the rills

No lamps to fill, no chimneys to wash
So that makes more convenience for the housewife
When our days work is done and night comes on
Just press the button and the light will come on

– Grace Lee Payne Creel, 1947

The transition from dynamic to dormant ethnobotany in the Bull Run Mountains can be viewed through a socio-economic lens in terms of its relationship to household production of foods and medicines, exchange and processing infrastructure in the community, and use of agricultural and forest lands. The transition also had an influence on the social fabric of local communities by changing the division of labor and homestead skills. These themes emerge quite starkly from the historical record and interviews of informants who lived through the transition period of the mid-1940s to mid-1950s. Below, I present excerpts that illustrate the connection between ethnobotanical knowledge and socio-economic characteristics of Bull Run communities before and after the transition to dormancy and identify a range of factors from farm policy to electrification that played a role in this transition. I’ve organized the chapter into three major parts. In part one, I delve into the concept of ethnobotany as a major factor in the local
economy, by discussing its role as a human capital input necessary for sustaining homesteads in the predormancy era. In part two, I discuss how dormancy affected the diversity of regional economic infrastructure. In part three, I conclude by summarizing what the socio-economic perspective can tell us about the concept, causes, and consequences of dormant ethnobotany.

4.1 Ethnobotany as an Input of Human Capital into Household Production

One useful way to understand the phenomenon of dormant ethnobotany from the socio-economic perspective is to focus on the role of plants as an input into household production. First articulated by Becker (1965), household production is the process by which households combine external inputs in the form of goods purchased on the market, obtained through barter, or gathered into useful “commodities” such as lodging, meals, bedding, and home remedies. Household production is an important component of the economy, but is largely non-market in nature, and so it is not quantified in the Gross Domestic Product (GDP). Alternative national accounting metrics, such as the Genuine Progress Indicator, attempt to remedy GDP shortcomings by reporting the value of household production (Talberth et al., 2006).

The household production process requires two internal household inputs – time and human capital. Human capital, one of the four types of essential capital in an economy refers to the stock of competencies, knowledge and personality attributes embodied in the ability to perform labor so as to produce economic value (Sullivan and Sheffrin, 2003). It is the attributes gained by a worker through education and experience. In the pre-dormancy era, one of the consistent and central experiences lived by homesteaders involved gathering, growing, processing, and storing diversity of foods and medicines from local sources. Ethnobotanical knowledge was essential to these activities. As such, ethnobotanical knowledge falls squarely
under the definition of human capital essential for the efficient operation of homesteads in the pre-dormancy era.

Dynamic studies confirm the importance of ethnobotanical knowledge as a human capital input into the household production process. For example, Reyes-Garcia et al. (2008) found a statistically significant association between the ethnobotanical knowledge of the male household head and crop diversity using data from the Tsimane, a native Amazonian society of farmers and foragers in Bolivia. Doubling the stock of ethnobotanical knowledge of the male household head is associated with a 9% increase in the number of crops sown by a household (Reyes- Garcia et al., 2008). This crop diversity, in turn, helped stabilize their society over time. As another example, a study of that same society by McDade et al. (2007) found that “each standard deviation of maternal ethnobotanical knowledge increased the likelihood of good child health by a factor of >1.5”.

As with any good produced on the market, there are a variety of ways to go about generating a given amount of any home produced commodity that requires varying amounts of time and human capital. For example, one could produce meals at home entirely through market purchases and relying on the time and skills of food preparation workers in the prepared foods industry. In this situation, there is virtually no input of human capital by householders. On the other end of the spectrum, one can produce meals at home by gathering wild or cultivated plants and preparing them in tasteful combinations relying on one’s own cooking skills. A poignant example comes from my interview with Sara Douglas where she describes the use of wild greens, how they were bartered and used in local cooking:

When I grew up there was cress, wild cress. In the spring you’d go out with a big bag and you have cress on some of the fields that had it and when my husband ran the mill, all the people would bring in a big bag of cress and you would give em
some money for it. I think he paid or maybe they just gave it to him, so we had cress too and that was real good. Wild cress would grow in the wheat fields. And poke too when it’s real young, the little leaves, they make good greens, I always had that. You cooked it like spinach, until it was tender with a little vinegar over it when you ate it, but it was good (Mrs. Sara Douglas).

In her situation, there is a high degree of reliance on one’s own human capital, which in this case, takes the form of deep ethnobotanical knowledge that guides the selection of nutritious wild plants and how to prepare them. As noted by the National Research Council (2005), the household level decision to acquire and use human capital in the production of household commodities is influenced by preferences, the relative prices of market substitutes, relative skill levels, and technology. For example, the acquisition and use of ethnobotanical knowledge for household production would be positively correlated in this framework by a preference for home cooking based on local wild foods, high costs of obtaining foods from the market, strong ethnobotanical skills relative to other skills one may offer “on the market” and the absence of easy technological substitutes. Conversely, this suggests that changes in cultural values that, for example, diminish preferences for home foods, economic factors that increase the relative price of such foods, and the emergence of technological substitutes for home cooking would contribute to dormancy.

Viewing ethnobotanical knowledge this way provides an important insight into the transition to dormancy. For example, the knowledge of where wild berries grow, what season to pick them in, how to prepare them and how to store them becomes obsolete as preferences change in favor of relatively inexpensive cultivated berries on the market and introduction of new technologies such as refrigeration. Indeed, as I previously noted, the appearance of the “deep freeze” in the Bull Run Mountains replaced the need to apply local ethnobotanical knowledge in constantly planning for a family’s consumption of fresh foods. This technology
supported the larger infrastructure of commercial food processing, for example, frozen Swanson’s TV dinners. Likewise, and as my interview with Jack Dawson suggests, the availability of spring greens from the market replaced greens that could simply be gathered “for free” from the hills and fields around Bull Run—a transition that reflects change in preferences but also the fact that time spent foraging probably became more valuable away from home earning wages in the market economy.

Thus, the concept of dormant ethnobotany can be seen as a decline in the efficiency of ethnobotanical knowledge as an input into household production relative to market and technological substitutes.

4.2 Effects on the Structure of the Local Economy

As an important human capital input into the operation of homesteads, ethnobotanical knowledge exerted an indirect role in sustaining a local economy structure geared towards supplying and sustaining these homesteads. As in our modern economy, households formed the locus around which all other economic activities revolved. In the pre-dormancy era in Bull Run, homesteads were characterized by a high degree of self-sufficiency and resourcefulness derived, in part, from people’s intimate connection with plants, place, and one another. Peoples home production of foods, medicines, shelter and other homestead related activities, in turn, were supported by a local economic network of mills, kilns, stables, and metal workers, a diversity of agricultural crops, and a division of labor that delineated clear roles for both men and women.

Small self-sufficient homesteads were typical in the countryside and were common since before the civil war. This legacy of a self-sustained economy and the ability to locally produce household goods evolved in part because of the difficulty of travel for those who settled in the piedmont region of Virginia (Fauquier County, 1959). In Fauquier County alone, 1840
homestead farmers produced an astonishing amount of corn, wheat, oats, and other cereals. For example, 54,478 pounds of tobacco were gathered; 75,195 pounds of wool sheared; and a healthy number of cattle, sheep, and swine were raised. The local blacksmith forged agricultural equipment, bricks used in local buildings were made in nearby kilns, and plaster was made with burnt limestone that was milled locally, along with timber.

The typical homestead had an icehouse, a hole in the ground that was roofed to store ice cut in ponds from the winter where ice lasted all year. A springhouse with cool running water provided preservation for milk, eggs and the like. A meat-house was where meat could be smoked, hung, and stored. Hog killing was a big event on every farm, when the first cold fall day saw meat that would then provide for the following year. And of course, there was the homestead garden (Faquier County, 1959). Many quotes captured during the interview process that relate to the memory of gardening create a picture of mostly small scale family farms or homesteads that were producing and engaging in local distribution of foods from their fields and gardens. My interviews with Elizabeth McClaughty and Mary Stewart, descendant of the family that founded Stewart Town on the eastern side of the mountains, capture the essence of self-sufficient homesteads in that era:

Well we didn’t have a big farm. I mean we had enough land we raised corn, chickens, hogs, cows. …What we raised was the things we ate. And of course we had cherry trees and we had every kind of apple tree you could think of. We also had two or three different kind of pear and peach trees. We had everything we needed over there except sugar and coffee. We made Hay in the fall for the cows. I don’t think anybody bought anything from way off anywhere” (Mrs. Elizabeth McClaughty).

Yeah. People had canned. My mother and father used to raise their food. We had chickens and hogs and cattle and we had our own food up there. My father would kill hogs end of the fall and we’d eat the meat and the eggs …you’d kill a few chickens out of the yard and we just lived off that, you know, then my mother would can food. Anything she could, she made preserves, canned peaches and canned applesauce (Mrs. Mary Stewart).
Local mills were an integral part of the economic landscape, and had been for quite a while as evidenced by a deep historical record:

Small mills that dotted the landscape, once found on any stream that could be dammed provided the backbone to small settlements throughout the piedmont, especially in Fauquier County. Mills were constructed for milling timber, grinding limestone for plaster and agricultural fertilizers, wheat for flour, corn for cornmeal, sumac for tanning…(Cooke, 1880).

In 1876, there were over 80 small mills in Fauquier County dotting every stream that had the basic potential to be a support mill. In the Bull Run Mountains, which sits at the junction of three counties, there were at one time 13 mills, two of which were saw mills, and one mill was a Woolen Factory, Kinlock Mill. In addition to the two larger, more commercial mills, (Aldie and Beverly Mill) there was Logan Mill, Monroe Mill, Haines Mill, Rock Hill Mill, Burnt Mill, Sullivans Mill, Gaines Mill, Kinlock Mill, Howell Saw Mill, Crains Mill, Gossom Saw Mill, Carters Mill, and Skinker Mill. Often the mill was named after the miller’s family. These mills were extremely difficult to operate and maintain, as they were dependent on the flow of the stream, and the skills of the miller. These small mills were central to small farms and the local community. Mrs. McClaughty’s recollections confirm the central role of small mills during the pre-dormancy era where her family would take her corn and as well her family mill which was used to press apples for cider:

We had what you call a cider mill, we’d gather the apples in the fall and you press all the juice out of it and while it was still sweet you could drink it…I am not sure but I think you had to mix a little bit of vinegar with the cider and put it in jugs in the dark and it turned to vinegar. We always had our own vinegar. We took our own corn to the local mill (Gains Mill on Hungry Run) and had cornmeal ground (Mrs. Elizabeth McClaughty).

As mentioned, the time period identified as the shift happened over a span of time starting in the Great Depression and leading up to the end of World War II. As local agricultural production faded, so too did the complex infrastructure supporting it. Nowhere was this
transition more evident than in the town of The Plains, located on the western slope of the Bull Run Mountains. The steel rails, which had been in place since 1852 and ran through Thoroughfare Gap, discontinued passenger service in 1941. Service resumed after the war, briefly in 1947, and then stopped for good in 1948, ending both rail and passenger services in The Plains. The Plains village quickly fell into its darkest times. The stores in the village were dependent on farmers coming to town to pick-up or send shipments by rail. Like the mill, the rail was central to agricultural and community life. Fruit from area orchards along with cattle and horses were loaded on freight trains at The Plains. Now cars and huge trailer trucks drove through The Plains, and shop owners and families left town in the 1950s to escape the noise and traffic. The Plains became a place known for its drunks, drugs, and prostitution. By the early 1970s, The Plains along with several other small towns fell below the Department of Housing and Urban Development (HUD) threshold for impoverished communities. One indicator was the percentage of housing units built before 1940. The HUD guidelines set that threshold at 33.77%; in The Plains it was 71.1%. Another is the percentage of people living below the poverty line; HUD guidelines set the threshold at 11.07%, and in The Plains it was 30.1%. Population fell accordingly as described in the quaint book featuring the history of The Plains (Evans and Gott, 1993). What this free fall suggests is that while these changes were certainly related to a change in preference in cars over rails it was also due to a decrease in local agricultural production during the transition period. Agricultural statistics bear this out quite well.

For example, the Virginia Department of Agriculture’s Statistical Services (1999) reported 2,107 farms in Loudon County. In 1959, the number of farms dropped to 947. In 1935, there were 1,209 farms that grew apples and peaches. By 1959, the number of farms dropped to 40 farms growing fruit trees. Also in 1935, there were 1,674 farms reporting poultry
sales. The number of farms dropped to one in 1959. In 1935, 30,366 acres were planted. By
1959, that figure fell by more than half to 14,973. Acres planted in wheat dropped from 23,428
to 6,591 during that same period. These statistics provide compelling evidence of just how
significant the economic transition was during the mid-1940s to mid-1950s period. The transition
to dormancy is a key aspect of that transition.

Another interesting economic aspect of the transition is how it affected the division of
labor between men and women. Mr. Partlow, owner of the local store in Aldie and quoted below,
goes into detail of how in his family it was the women’s job to tend to the homestead. As he
spoke there was a deep fondness in his voice that came across as sincere respect for the amount
of work the women in his life carried out on a daily basis to provide for the family.

My mother would can vegetables, green beans, and corn in glass jars. And they
would live off their own meat. They raised hogs and butchered them. They didn’t
even buy bread; they’d bake their own bread, butter and such. Made their own
butter, had cows, my grandmother and aunt they were the two that milked the
cows. It was women’s work not men back in those days. And cows they’d turn
them out and they go down and over the hill in the pasture and they come around
back over across the driveway coming onto the house and drive the cows over and
get them and bring ‘em in every evening. Milk ‘em twice a day (Mr. Muriel
Partlow).

Women stayed busier than they are now. I sawed many a pile of wood at night.
And I milked the cow since I was knee-high, just about everybody kept a cow.
We would bring the milk in and put it in pots and let cold water run over it. A lot
of houses had milk houses out in the yard, some place that stayed damp and cool.
Some houses would get cold water running down from the spring (Mrs. Elizabeth
McClaughty).

Men’s roles, on the other hand, were overall management of the business side of
agricultural. As illustrated by this quote from Mr. Glick, frequent gatherings of men at the local
mill were the main forums for information exchange

My grandfather purchased this farm in 1996. I used to go to the mill with my
father to take feed to be ground, and buy feed, fertilizer, salt and minerals for the
livestock. The mill was a good place to visit. Farmers, on a bad day, would go in there and catch up on all the gossip and what was going on (Mr. Allen Glick).

So as the local economy shifted from a homestead-based economy where ethnobotanical knowledge played a central role to a market economy where food was largely bought from outside the region, the division of labor between men and women was also fundamentally altered. What emerged in the 1950s, was an idea that women stay home and men earn the income in the market economy. As these interviews suggest, this is the complete opposite of how work was valued during the pre-dormancy era, women’s work played a vital role in what was achieved on the homestead with a variety of skills that included ethnobotanical knowledge of working with the land, and with the knowledge they contributed greatly to the economics of the family.

4.3 Implications for the Concept, Causes, and Consequences of Dormant Ethnobotany

Viewing dormant ethnobotany through the socio-economic lens offers some interesting insights into the concept, causes, and consequences of dormant ethnobotany. A socio-economic perspective shapes the concept of dormant ethnobotany by identifying ethnobotanical knowledge as an essential human capital input into household production in the pre-dormancy era. The transition to dormancy can be seen as a decline in the efficiency of ethnobotanical knowledge, which is an input into household production relative to market and technological substitutes. The transition to dormancy can then be seen as part of the broader transition to communities decoupled from their biological and historical roots and therefore more vulnerable to change.

With respect to causes, there are two primary drivers suggested by the forgoing discussion—technology and farm policy. The introduction of the “deep freeze” to the Bull Run Mountains coupled with rural electrification fundamentally changed the relationship between homesteaders and ethnobotany away from one of necessity. For the first time, non-local foods could be obtained and stored thereby obviating the need for time-intensive activities such as
foraging and canning. Farm policy also played a major role. By subsidizing large, centralized monoculture farms, farm policy after the New Deal helped reduce the cost effectiveness of small, self-sufficient farms with a high degree of crop and garden diversity. Diversified production for local consumption simply could no longer compete with mass-produced foods from industrial agriculture and so the ethnobotanical knowledge and skills that supported self sufficient homesteads no longer made economic sense to retain.

The historical record and interviews highlight some of the consequences of the transition to dormancy. The loss of self-sufficiency is one obvious effect. As market foods and medicines replaced those gathered and prepared at home, households lost their ability to sustain themselves. While one may certainly argue this is an efficient outcome because the market provides foods and medicines at a far lower cost, still, the loss of even the possibility of self-sufficiency represents an increase in household vulnerability that all too often comes to the forefront in hard times in the form of food lines, idle labor, and increases in preventable illness. Other consequences of the transition to dormancy were the indirect effects on the local economy. The transition to dormancy in the Bull Run Mountains coincided with a loss of the mills, kilns, stables, canneries and metal workers that provided the infrastructure for a local economy built around sustaining homesteads and a diversity of agricultural crops and gardens. Another shift involved the division of labor between men and women. In the Bull Run Mountains, women were in some ways keepers of ethnobotanical knowledge as it related to homestead skills while men held ethnobotanical knowledge that related to more large scale agriculture that played a secondary role in the emerging market-based economy. After the shift to dormancy, the market economy became dominant and the primary responsibility for generating the cash income needed to purchase market goods and services fell on men.
Chapter 5. Dormant Ethnobotany from the Cultural Perspective

Mary Fried fish on Friday Night
Her hand thin yet strong her posture
Sit or stand is straight

Her uniform is light blue
White trimmed, pressed
Lines neat consistent
She is an American domestic

She is Mary Stewart of
Stewart town
She holds Sumac in her hand
Polk there is no more No need
To search out fresh greens in spring

Her brother digs Sassafras
And her other brother mows
The graveyard
Grass is kept immaculate
Its park like feel is dreamy
The old white church sits on the
Top of the hill, empty yet
Beautiful, as Mount Zion is

The long lost log cabin slowly decays
The fire is out
The vinegar is no longer made
The store has disappeared
Razed as they say the school the Post Office
Is gone, the deal done
The trade was made, a cultural divide
And independence given away

– Susan Leopold 2009
While ethnobotany certainly has its pragmatic dimensions reflected in its importance as a form of human capital used in household food production it also has more intimate significance as a practice that helps define a culture that is unique and endemic to place. As I have documented in the previous chapter, a socio-economic perspective contributes greatly to understanding the concept of dormant ethnobotany, its causes, and consequences. Here, I show how the cultural perspective—as manifested by sense of place and folklore—can do the same.

In particular, the cultural perspective as it relates to dormancy offers insights that relate to lifeways that are distinct to the Bull Run Mountains as described in local folklore. These stories personalize the experience of interacting with the local ecology and places and provide a sense of life as it was when active ethnobotany played a central role in day to day life. This stands in stark contrast with the socio-economic perspective that tends to generalize human interactions with local ecology and places in terms of broad macro economic trends and statistics on the farm economy.

The cultural perspective illuminates how knowledge and use of plants was woven into the community culture and sense of place of the Bull Run Mountains and their legends, rituals, stories, and beliefs before the transition to dormancy. In accordance with the standard classification established by Hofstede (1991) community culture manifests itself in different ways and differing levels of depth. Symbols represent the most superficial manifestations of culture, with heroes and rituals in between (Figure 10; adapted from Hofstede, 1991):

Symbols are words, gestures, pictures, or objects that carry a particular meaning which is only recognized by those who share a particular culture. New symbols easily develop, old ones disappear. Symbols from one particular group are regularly copied by others. This is why symbols represent the outermost layer of a culture.
Heroes are persons, past or present, real or fictitious, who possess characteristics that are highly prized in a culture. They also serve as models for behavior.

Rituals are collective activities, sometimes superfluous in reaching desired objectives, but are considered as socially essential. They are therefore carried out most of the times for their own sake (ways of greetings, paying respect to others, religious and social ceremonies, etc.).

The core of a culture is formed by values. They are broad tendencies for preferences of certain states of affairs (good-evil, right-wrong, natural-unnatural). Many values remain unconscious to those who hold them. Therefore they often cannot be discussed, nor can they be directly observed by others. Values can only be inferred from the way people act under different circumstances.

Symbols, heroes, and rituals are the tangible or visual aspects of the practices of a culture. The true cultural meaning of the practices is intangible; this is revealed only when the practices are interpreted by the insiders.

![Figure 10. Manifestation of Culture at Different Levels of Depth. (Adapted from Hofstede, 1991.)](image)

Hofstede’s classification provides a good roadmap for identifying and cataloguing all the pertinent elements of culture that manifest in any particular setting. In the Bull Run Mountains, elements that are pertinent to my study include values that reinforce sense of place (and
underscore name-place legends) as well as heroes and rituals that appear in the local folklore that demonstrate the link between plant knowledge and personal power.

In order to establish the link between ethnobotanical knowledge and culture, I first describe how one important element of culture—sense of place—manifested itself in the pre-dormancy era throughout the Bull Run Mountains with my interviews and how this sense of place was inclusive of knowledge and use of plants. Sense of place is derived from the “practices” of daily interactions—it is one of the intangible aspects of cultural meaning as discussed by Hofstede that spans each manifestation of culture.

I then further develop the cultural perspective by delving into the unique folklore of the Bull Run Mountains, and describe how plants and their uses made their appearance in three folkloric themes: (a) name place legends; (b) heroes and rituals, and (c) knowledge as power and necessity. These stories are a link to the establishment of regional identity by those who settled in the mountains. Knowledge of plants and nature was part of that identity and also perceived as power. I make the case that folklore is a vessel in which knowledge was carried from one generation to the next. Evidence is then presented from interviews with informants as well as historical accounts that link the transition to dormancy with cultural isolation and social stigmatization of those who continued to rely on ethnobotanical knowledge and skills. As previously discussed, plants were no longer a necessity from an economic perspective, and as I show here, those who continued to use them were perceived as unlettered and primitive. This chapter concludes by discussing the concept, cause and consequences of dormant ethnobotany through the cultural lens.
5.1 Sense of Place

A key cultural aspect of ethnobotanical knowledge and its application is its ability to instill a deep sense of place. This sense of place also provides insight to the core of cultural manifestation, values. One’s use of plants in the local environment develops values in regard to one’s local resources. This is revealed in two ways: awareness of where things come from and the understanding of a self-reliant closed loop system that includes people and the ecology in which they are embedded. Sense of place is defining oneself in terms of a given piece of land or geographical setting that encompasses daily practices and interactions (Yan Xu, 2010).

Landscape acts as teacher in shaping our perceptions of place. Analysis suggests that four major components contribute to a sense of place. These emotional and spiritual bonds to the land are: (1) toponymic—related to naming places; (2) narrative—involving personal or group stories or legends; (3) experiential—associated particularly with dependence and survival, and (4) numinous—spiritual (Yan Xu, 2010). My study of the Bull Run Mountains revealed many examples of these bonds.

For example, foraging and preparing for the winter in the Bull Run Mountains required a keen awareness of where food, fuel, medicines and building materials come from. Knowing which mountains, ravines, fields, and forests contain plants and plant products essential for survival creates an intimate bond with the land that is passed down generation to generation and is part of the “glue” to the social fabric holding rural communities together over time. Often this bond is manifested in place names. In the Bull Run Mountains, Chinkapin Hill, Locust Bottom, Hickory Grove, Poplar Hill, and Oak Mountain, are a few examples of how important plants and trees are identified in the naming of place.
Sense of place is also derived from the feeling of being part of a “closed-loop” system of reliance on the land. Mrs. Douglas expressed the close connection these farmers had and recalls how resourceful they were in the closed loop system before you could buy needed agricultural products from outside sources.

But farmers, they’d use everything ‘cause they fed what they raised; the corn was to feed their livestock. Their horses and cattle and cows and then they’d use the manure to fertilize the fields again…this was before you could get fertilizer and lime they made good use of what they had (Mrs. Sara Douglas).

Mr. Curtis Poland, a local farmer, spoke passionately about how he felt about the way corn meal tastes when it comes from the local mill. What comes across is the deep sense of pride connected to what you grow and then you bring it to the mill and in the end the feeling that is associated with the taste of the final product.

You’ve got to know what meal taste like that was ground on stones. It doesn’t get hot. You need to know if you are going to get good biscuits, you have got to grind it on a stone (Mr. Curtis Poland).

A deep connection to the land and people is an essential element in community stability and social cohesion. In his essay, “Children in Touch, Creatures in Story,” Gary Paul Nabhan (1997) explores how childhood experiences have changed over time and the associated implications of that change with respect to knowledge of local environments. Nabhan (1997) interviewed Anglo, Hispanic, and O’odham (Papago/Pima) and Yoeme (Yaqui/Cahitan) children in the summer of 1992 to compare their experiences with nature. He discovered that even though these children had access to open space, familiarity with nature was related more to television. This was true for 77% of the Hispanic kids, 61% of the Anglos, 60% of the Yaquis, and 35% of the O’odham. Nabhan was disturbed most by their failure to know basic facts about their desert home. For example, 55% of the Mexican kids didn’t know that the prickly pear fruit, a staple in northern Mexico for 8,000 years, was edible. Elders’ knowledge of plants and
animals was not as valuable to the children because it was not “booking learning.” Nabhan (1997) makes the point that, “our world today is one in which we are losing ways of speaking about plants and animals as rapidly as we are losing endangered species themselves.” These observations demonstrate how what happened in the Bull Run Mountains was not unique, that, in fact, the same process is unfolding in many different regions where land based cultures still exist.

When I asked Mrs. Stewart if she had a favorite place she responded that not one place stood out, but from her quote there is the impression that life in the mountain itself was an education and that those experiences brought joy.

Well not particular. We’d been in them Mountains when we were school kids to learn, all up through the woods. My father had horses and we’d hitch the horses to the wagon and we didn’t have a car then and we’d jump on the wagon and he’d give us a ride and that would be just like heaven (Mrs. Mary Stewart).

Local Historian Alice Maude Ewell, who grew up at the base of Bull Run, wrote about the community of African Americans where Mrs. Stewart was from. “Their boys and girls are now almost the only ones who now-and-then climb up to see the view, to get arbutus, wild strawberries or huckleberries” (Ewell, 1931). The experiences with plants are a part of connecting to feelings that create sense of place, that are created during childhood.

Mr. Partlow who grew up in Aldie and used to give tours of Aldie Mill is also known for his knowledge of native wildflowers. When I asked him where his interest in local plants came from his response was based on his childhood encounters.

Miss Mary would take her Sunday school class up into the woods by Indian Spring, she knew flowers, she would show us the blood root. She’d tell us the Indians used it to paint themselves when they were going on a warpath. So we would take it and we would paint ourselves with it and do things like that. And now if I can help it, I don’t let anybody pick em. Years later I guess more rubbed off than I thought (Mr. Muriel Partlow).
Interacting with plants is a part of what defines our sense of place. When one cannot find or connect with a sense of place it influences the type of values that one has towards the natural world. This is very evident in the way Mr. Partlow discouraged those from picking native wildflowers.

Sara Stein (1993) writes about restoring the ecology of our backyards by seeking out and helping native plants to return. Her book *Noah’s Garden* guides the reader through her personal discoveries as she expresses her fear for future generations. “Today’s children, growing up on lawns and pavements, will not even have nostalgia to guide them, and soon the animals will be not only missing but forgotten (Stein, 1993).” Stein, thankful for her childhood memories of the outdoors filled with all its creatures, asks the question: how does one miss what one has never known? This is certainly the same point that Nabhan (1997) makes with his research on the decline of cultural knowledge in indigenous youth of the southwest.

A sense of place is defined by memories based on experiences that one has with one’s environment whether it be pavement and grass or woods and streams. Kent Ryder (1993) explored what he calls the invisible landscape, pointing out that even “the newest suburb sees just as much human experience as the oldest and most tradition-rich village.” Ryder’s (1993) conclusion is that it is important to become aware of our own personal invisible landscape, which he defines as “imaginative vistas built upon the actual physical landscape.” This process of cultivating one’s sense of place is what he terms as learning to feel every bump in the ground, and therefore the potential arises for us to embrace responsibility. Cultural geographer Yi-Fu Tuan (1993) looks at a variety of different ways one perhaps feels those bumps in the road in his book, *Passing Strange and Wonderful*. Tuan starts with the basic senses that humans have and works towards exploring the complexity of human constructs, such as art and architecture. Tuan’s
argument is that esthetics represents the cultural core, and can be used as a moral force within society. This theory builds upon Tuan previous book *Topophilia* (1974), in which he explored how the environment shapes perception. Tuan, in comparing various indigenous groups, makes the argument that the biggest difference in lifestyle and perception is not between the non-literate tribes and that of the urbanized society but among “primitives” who live in totally different natural environments. This becomes obvious when Tuan compares the lifestyles and world-views of the Bushmen of the Kalahari Desert to the Pygmies of the rainforest. Certainly ethnobotany emerges as an environmental component shaping ones perception of place. For example, the Bushmen as plant gatherers are experts at reading the ecological and botanical evidence for edible roots and fruits. Sense of place is thus a collage of the cultural and environmental context that a person identifies with and the degree to which one can experience and connect. Its loss, then, becomes an important step in the transition to dormancy by severing the connection between humans and the plants, animals, and landscapes that make up the local ecology.

5.2 Insights Offered by Folklore

In dynamic settings, ethnobotanical knowledge has almost always been transmitted orally. Oral traditions are part of the makeup of cultural identity that survives from one generation to another, and may take several forms including folklore, sayings, teachings, ballads, songs, chants or other forms of speech and song. Ethnobotanical knowledge is part of the oral tradition that connects people, place, and plants in cultures where it is active. Examination of folklore is an appropriate tool in ethnobotanical research because in dynamic settings folklore plays a vital role as a vessel for communicating plant knowledge and passing it on generation to generation. As noted by Manandhar (2002), “ethnobotanical knowledge can be divided into two parts: that gained in schools and universities, and that gathered from local knowledge or folklore, which is usually communicated verbally.” Here, I follow Richard Waterman’s definition of
folklore offered in the *Standard Dictionary of Folklore, Mythology and Legends*: "Folklore is that art form, comprising various types of stories, proverbs, sayings, spells, songs, incantations, and other formulas, which employs spoken language as its medium" (Leach and Fried, 1984). Also relevant is Stith Thompson’s perspective offered in that same volume: “The common idea present in all folklore is that of tradition, something handed down from one person to another and preserved either by memory or practice rather than written record.” Two relevant classifications emerge from a review of folklore relevant to the Bull Run Mountains: folklore that established the origin of Bull Run Mountain cultural connection between people and place through name-place legends, and folklore about legendary figures and their relationship to plants, nature, and power that establish various depths of cultural manifestation.

Many federal and state policies that emerged from the Great Depression affected wide swaths of society. Thus it seems appropriate that the description of local folklore begins with the Federal Writers’ Project (FWP) created in 1935 out of the New Deal programs. Folk legends, collected by the FWP, are relevant to understanding how the people of the mountains were connected to the land and its biological resources. Katherine Morrissey (1997) describes regions as “mental territories,” essentially those boundaries that are drawn by the residents themselves. Hoberman (2000) stated, “Any convergence of landscape and culture can constitute a region.” What is powerfully clear from the name-place legends and the legends surrounding the naming of the Bull Run Mountains is the fact that these mountains served as a mental territory and region in their own right where there was a strong convergence of landscape and culture. Hoberman (2000) points out that often in folklore studies small geographical areas are overlooked. These legends are the stories that define cultural/regional identity by the residents themselves. The stories/tales/legends I discovered in the Bull Run Mountains, established this region as having its
own cultural identity, suggesting the relationship between people and the landscape was uniquely endemic to the mountains.

The Virginia Writers Project (VMP), a subsidiary of the Work Projects Administration (WPA) and the FWP, collected folklore from 1937 to 1942 throughout all of Virginia. The VMP project as described by Barden (1991) was controversial, seen by some as a waste of tax dollars, and at the time rejected by academia. Thankfully there were those, such as John Lomax, who worked for the FWP, who recognized that “such an opportunity to collect this material may never recur” (Mangione, 1972). The stories collected by the VMP remained forgotten in a box for fifty years, until Thomas Barden rediscovered them and published *Virginia Folk Legends* (Barden, 1991), an edited book based on these stories. What makes these stories relevant is that a few of these collected stories relate specifically to the Bull Run Mountains of Virginia. This was truly a fortuitous find, and had they not been recorded they most certainly would have been forgotten. These stories were still alive in the 1940s but tragically the vessel of folklore had been broken not long after, since no one that I interviewed retold these stories despite my suggestion to do so.

The definition of legend is a traditional narrative, set in this world, in the past, involving human characters, which is regarded as fact by its teller and its audience (Baker, 1982). The question of whether the event of a legend actually occurred and is true is perhaps best left unanswered. The validity of the legend is far less interesting than the question as to why the story circulated in tradition and thrived? What purpose did the story serve? One purpose is the naming of place. Name-place legends serve to link local features of the landscape to remembrances of a tragic incident. The legends help to understand what was important to the
community in a specific time and place. The legend is also important because it establishes when this cultural connection to place took hold.

Barden (1991) suggests that legends can provide an aura of importance when the name of a place refers to a feature of the local landscape and a national hero, as in the legend “How Mother Leather Coat Mountain was Named”. This legend is about a peak within the Bull Run Mountains, which was named by George Washington. The legend states that when George Washington was a young surveyor he was impressed by the hospitality of an old woman who throughout the year wore a long leather coat. Legend, as it was recorded, stated that, “until a few years ago there were a few rotting logs of her cabin that could be seen among the thick undergrowth” (Morton, 1941). Barden (1991) also suggests that the legend has Freudian overtones connecting the “father” of the country with this local “mother.” Most importantly, it reveals the pride associated with the Bull Run Mountains for those that passed along the legend of George Washington’s fondness of the Mountains. In doing so it follows Hofstede’s (1991) conception of cultural manifestation, with heroes as persons of the past or present, real or fictitious who possess characteristics that are highly prized in a culture, such as George Washington. They also serve as models for behavior, such as the hospitality provided by Mother Leather Coat.

Donald Wilson, librarian at the Bull Run Regional Library, contests the legend and suggests that old Mother Leather Coat is simply a myth (i.e., not grounded in any actual occurrence) and the name truly originates from an old Indian name, Olmuthalethacoat. He has dated this name back to a land grant, dated 1728, and believes that this Indian name is perhaps the original name for the Bull Run Mountains. One can only wonder what this Indian name might have signified. It is not hard to debate which origin is correct, but hard to confirm or know
for certain how the name truly came into being. The debate between the notion that a lost language and tribe still impacted the name used today, or that a folk legend about a generous woman in her leather coat inspired a young George are two fascinating ideas. Perhaps truth lies somewhere in between and signifies something even more interesting: the intersection between two cultures, one that was soon to vanish, and another just beginning. Thus it marks the cultural foothold that was beginning to take place. The legend and the myth reinforce the way in which physical place and the people associated with that place are connected by a name or a story. Mother Leather Coat is a name still recognized today, referring to a peak off to the northwest as you pass through the Thoroughfare Gap of the Bull Run Mountains.

Name-place legends often grow around the sites of great tragedy or crime, and such is the case in the legend that surrounds “How The Bull Run Mountains Got its Name.” The story describes a time when the first settlers made their way along the Carolina Road, which lies at the mountain’s eastern base. The mountains to the west were dangerous due to wild animals and fear of Indians and thieves, so livestock that escaped along Carolina Road were left behind rather than risk a dangerous hunt for them. Thus, a young bull was left to roam at will and grew to unusual proportions, becoming a terrible menace. A few local men went to hunt the bull, but upon killing the bull, discovered it was too large to bring back in one trip. They cut the meat up, took what they could, and left one hunter to guard the meat they would soon come back for. Becoming cold, the lonely hunter used the skin of the bull to cover himself to keep warm through the night. A thief, coming to steal the meat and not noticing the man, tied the tail of the bull hide to his horse and took off, creating the name “Bull Run.” This legend appears not only in the WPA collection but also in a local history book (Ewell, 1931). Eugene Scheele (1996), a local historian and mapmaker believes that the Bull Run River was named for the many bull rushes
found along the river’s edge and that since the river’s headwaters originate in the mountains, the mountains were named after the river. Both interpretations could be correct; perhaps the bull rushes did inspire the name of a river, and the legend of the wild bull discussed below in further detail reflects historically how the mountains at one time were known to be dangerous. Thus the two tales converge to describe the natural resources of the landscape at a time when the mountains represented danger beyond what was once a western frontier.

The study of the Bull Run Mountains takes place within a community that is not indigenous; it is important to understand that those who settled in the Bull Run Mountain had to establish their own unique cultural connection to this place. These settlements help indicate the time frame in which ethnobotanical knowledge based on life in the mountains began to take form. We know that the name Bull Run first appeared on a map published in Thomas Jefferson’s *Notes on Virginia* in 1787 (Figure 11).

*Figure 11. Map of Virginia 1787.* This image shows the earliest map naming the Bull Run Mountains of Northern Virginia, the Bull Run Mountains and River are highlighted in blue.
Certainly, just as the name began to define the geographical region of the mountains, the story of its names also provides insight into the mountain’s reputation as a dangerous one that provided a refuge for those wild bulls as well as for people. This small rugged mountain, and its reputation for being a place of danger and refuge could also explain why it developed its own unique cultural identity. In the words of Alice Ewell written in 1931:

“Within the last hundred years there were wolves on Our Mountain. As for Human inhabitants, they were first of all the fierce, warlike Doeg, or Dogue Indians. Their arrowheads and their amulets may still be found there. The first white settlers were probably an early upwash of the wave of runaways, - Redemptioners, ex-Convicts, and Outlaws, who after giving so much trouble along tidewater, escaped from their owners and overseers to people our Virginia Mountains. To those from Stafford and Lower Prince William, the Bull Run Mountain would be the first as they wended their way westward.”

In 1742, the Virginia Assembly acknowledged that the Carolina road, which runs parallel to the mountains, had become a haven for cattle and horse thieves, and was commonly referred to as the “Rogue’s Road.” Forty years later in 1779, during the French and Indian Wars, Hessian prisoners captured at Saratoga were marched along the Carolina Road on their way to Charlottesville. Baroness Riedesel, following her husband on this march, left behind a journal, in which she admires the scenery of the Bull Run Mountains, but also comments on the churlishness of the inhabitants. The mountain’s reputation continues as noted by Rattlesnake Gossom (1867-1957), who described the mountains as a dangerous place with more than its share of muggers, robbers and killers. His explanation of how the mountain got its name is more of a simplified version. Farmers were too frightened to go after their cows, pigs and bulls that strayed into the mountain, so the animals ran free, hence the name Bull Run.

The mountains, known to be dangerous throughout the 1700s to 1800s because of thieves, were also known for another certain species perceived to be dangerous as well, the timber rattlesnake, which became an object of local folklore. The Bull Run Mountains are the
easternmost range of timber rattlesnake (*Crotalus horridus*) in Virginia, and Gossom, a local store owner had an obsession with catching and keeping rattlesnakes at his country store, hence his nickname: Rattlesnake Gossom (1980). He was a well-known character and the local paper had this to say about him:

> If you sometime travel up in the tortured, irregular hills behind Waterfall, you will see the small white house nestling at the base of the Bull Run Mountains…The old man’s bristly white beard and beetling brows belie his spring step and lend credence to the tales you have heard concerning him and dealing with lonely night hunts and the capture of rattlesnakes (Prince William Journal, 1947).

Names help associate what is vital or significant at that time and therefore carry on. They also provide valuable insight to the time frame as well as the features of the most influential features of the mountains at a time when cultural values took root and began to manifest as folklore. Names speak for themselves about the relationships that are interconnected at a certain place in time, and Rattlesnake Gossom and the Bull Run Mountains are two fine examples.

In summary this tells us that before the 1940s the people who lived there, the species that they interacted with and the stories about them defined regional identity to the Bull Run Mountains. The telling of these stories indicates active ethnobotany. Conversely, dormancy is thus indicated by a time when there are few to no stories being told to define and create connection of place.

Name-place legends provided one focal point for folklore. Folk heroes and rituals are another. At the heart of our myths and legends is a hero, a man or woman often with unusual powers or knowledge who triumphs over obstacles. Usually, heroes are not omnipotent or immortal. Instead they represent the aspirations of common people and an expression of what it means to be at our best in their demonstrations of great strength, courage, wisdom, cleverness, or devotion. Legendary figures are heroes and certainly part of the folkloric record for the Bull Run
Mountains. What is also interesting is not simply the stories about these characters, but the
descriptions of healing powers they were able to tap into in their interactions with plants and
natural objects. Though this dissertation is focused on the shift away from plant use and the
intimate connection with plants and nature illustrated by folklore, it is important to dive into
what this shift left behind and what insight can be gained from the experiences expressed in folk
legends that provide a window into the past. Furthermore it demonstrates different levels of
cultural manifestation that existed in the Bull Run Mountains.

Rattlesnake Gossom’s grandson (Gossom, 1980) wondered if perhaps his grandfather’s
crazy ways were his attempt to become a legend like Simon Kenton (1755-1836). This certainly
falls into line with Hofstede (1991) who points out that heroes have characteristics that are
highly prized models of behavior. Gossom (1980), as a young child, heard his grandfather say,
“Simon fought with his fist, was an excellent eye gouger and the bears he killed were carried
home on his back”. The legends that were recorded that pertain to Simon Kenton through the
WPA project are fascinating because details of life in the mountains were interwoven into the
legends that highlight his upbringing in the mountains.

There is a sense of pride that Simon Kenton’s upbringing in the Bull Run Mountains
helped him become a famous frontiersman. He is famous for his many near death experiences
among the Indians, his time exploring the Ohio Frontier with Daniel Boone, and for his sudden
departure from his home in the Bull Run Mountains. When Simon Kenton was 16-years-old, he
was deeply in love with a young lady named Ellen Cummins. He was distraught when he learned
that the love of his life was to marry a young man by the name of Leachmen. After a terrible
fight, Simon believed he had killed Leachmen. Knowing the penalty for murder was death by
hanging, Simon headed west. He would later return to find that Leachmen had not died.
Certainly Simon Kenton as a hero figure who is highly prized in the cultural setting fits Holstede’s figure of cultural manifestation. The “stone house” that is now part of the Natural Area owned and managed by Virginia Outdoors Foundation is believed to be that of Leachmen’s family, Kenton’s nemesis, shown below in Figure 12 (Pers. Comm., Claude Schock).

Figure 12. Homestead. Photograph of stone house in Bull Run Mountains, circa 1872.

Furthermore, the legends about Simon Kenton are rich in creating a sense of what life was like back in the 1800s, in regards to how plant use defined daily life. For example, one legend describes Kenton as a lazy boy in regards to daily chores, since there was lots of work on a farm in those days:

“the land had to be grubbed all the time to keep the forest from takin it back what it once had, and there had to be enough tobacco raised to pay the rent and get what things could not be grown at home, and corn to make hominy and feed the critter and the firewood to cut and fence rails to cure, beside all the work that women folks had to do. Simon though preferred to go off huntin and trappin, or huntin’ bee trees, and it said that he was the best in the whole mountain for that” (Peake, 1941).

As a local hero, Simon Kenton’s stories not only represent a deeper level of cultural manifestation, they also signify the role of story in the oral tradition. There is an entire chapter in Barden’s book dedicated to the folk legends of Simon Kenton because the stories are so unique. Susan Morton (1941), who recorded these stories, mostly from residents from the town of
Waterfall, on the eastern slope of the Bull Run Mountains, knew she had found something interesting in the fact that these stories were still in circulation even though Kenton had died in 1836. These stories were carried on in oral folkloric tradition, and were truly original to the Bull Run Mountains. The folk legends depict tales of Kenton’s earliest years growing up on the mountain, not about his well documented life as a frontiersman, thus confirming the originality as well as the role of the oral tradition.

One story, “Simon Kenton’s Growing Tree,” is particularly wonderful because it demonstrates an even deeper level of cultural manifestation – ritual. Rituals are collective activities, sometimes superfluous in reaching desired objectives, but are considered as socially essential (Hofstede, 1991). This is well illustrated in Simon Kenton’s Growing Tree. Additionally the story placed plant knowledge in the role of social power among the midwife whose ritual is attributed to Simon Kenton’s success in life.

The story begins with an old woman who lived by herself and “had a gif’ o’ doctoring wi’ herbs and roots she got herself and th’ proper time t’ use ‘em” (Beale, 1941). This woman was the midwife for the mountain and many said she had a lot to do with the future health of newborn babies that she helped deliver. One of her rituals to ensure a healthy baby was performed right after the baby was born and before the baby was washed: she took a piece of the newborn hair, and as soon as she could find a young tree she would cut a slit, put the hair into the slit, and then chink the tree up. She would most often choose a poplar tree (Liriodendron tulipfera) because it grows fast and straight. Because poplar did grow fast and straight, there was a risk that the tree would be cut before the child finished growing, and in this case it was bad both for the person who cut the tree and the child. In the case of Simon Kenton, she chose a gum tree (Liquidambar styraciflua), which grows slowly and sometimes malformed. This particular
gum tree was hit by lightening, and a limb was taken to make gun stocks. Both of these events should have caused the tree to be stunted but it grew tall and straight nonetheless, just like Simon Kenton.

This folk legend is so rich because it ties the history of midwives and the use of herbs and roots to life in the mountains. The legend also provides a link between local folklore and the necessity of herbal medicine. The legend reveals the folk magic/trick of a midwife admired for her abilities, reflects a unique belief system that connects human life to one’s relationship to the growth characteristics of specific tree species. It also reinforces the idea of how knowledge can be perceived as power; in this case the midwife’s knowledge of plants gave her presumed power. This knowledge existed because during Simon Kenton’s time plant use and the role of midwives were of necessity. This is important to the next insight into the concept of dormancy, because it is out of necessity that critical knowledge takes on the role as social power. Time wise it is important to point out that the social status of midwives shifted dramatically by 1935, when it was estimated that 37% of women in America were having hospital births, and by 1950, that number grew to 80% (Rooks, 1999).
5.1.1 **Knowledge as power and necessity.** Knowledge of plants and the powers of nature “back in the day,” as Jack Dawson, a local, would often say, was of necessity, and there is one story of folkloric proportion that represents the concept of necessity, and the relationship to power. Printed in the *Alexandria Gazette* in 1871, “The Mad Stone” is an account of Mr. Urial Triplet, who lived on the western side of the Bull Run Mountain, not far from Rectortown, and a stone that purportedly possessed special powers of healing. Urial Triplet is described as a plain but respectable farmer, with a large family and many relatives who vouched for his sincerity.

“The appearance of the “Stone” is about half the length of, a little thicker and broader than, and rounded somewhat in the shape of a man’s fore finger, is polished and solid on one side but rough and porous on the other; is light of weight but dark of color, and apparently is not a natural formation but an artificial composition” (*Alexandria Gazette*, 1871).

The mad stone is described as having magical properties in curing the most horrifying of circumstances, such as the bite of a mad dog. The paper goes on to tell the story of a man and a colored girl both bitten by a mad dog at the same time. The man went to the mad stone and got well, but the girl, who was not sent, died. This part of the story is not only an example of the mad stone’s power but also demonstrates the embedded racial issues of the time, and reinforces how African Americans had the least medical care, even when it came to the mad stone. I elaborate on this further later in the chapter.

The stone was passed down to Mrs. Lake Woodward of Rectortown, and in 1883 the stone was again in the paper. This time the article stated that patients traveled great distances to be healed by the mad stone and that the owners asked no payment for the cures it effected (*Alexandria Gazette*, 1883). The stone was to have been laid aside, having lost its virtue, until one day a man passing through from the valley offered to restore its properties in exchange for half the stone. After an agreement was made, the stranger placed the stone in tepid water, a
practice observed whenever the stone was applied to a bite. The stone is described in the article as adhering to the wound it infected by a virus, and remaining that way until the virus was gone. In 1971, local schoolteacher and historian John K. Gott wrote to the editor of the Alexandria Gazette that he had contacted a relative of Mrs. Woodward who remembered the stone, and reported that it seemed to have disappeared from the family. Gott was very interested in researching the stone because as a child he often heard his family talk about their belief in the curing ability of the stone.

The mad stone is an example of how folklore and power merge to represent and infuse the stone with healing attributes. It is a wonderfully local story, but also one that represents on a larger scale the reality that the knowledge of the power embodied in plants and natural objects was no longer a necessity and critical to everyday life after the transition to dormancy (and here, dormancy can be extended to objects of nature in general, not just plants). This is apparent in how the stone faded from history as the times changed and its charm was no longer needed. Thus, in the pre-dormancy era, necessity infused plants (like those used by the midwife) and natural objects (the stone) with power and once that necessity shifted the knowledge of and belief in that power became dormant. The transition to dormancy, then, can be seen as a break in the continuity of knowledge formerly passed down through the vessel of folklore in the form of name place legends, legendary figures, and their interactions with the healing powers of plants and natural objects.

5.3 Cultural Isolation and Social Stigmatization as a Factor in the Transition

I now turn to two factors (in addition to the decline of necessity) that may have played a role in the transition to dormancy—cultural isolation and stigmatization of families whose knowledge and use of plants in everyday life continued despite the “modernization” that went on
around them. Cultural isolation took place even within the small geographical area of the Bull Run Mountains, between two towns that are within a stone’s throw from each other and share the common start as settlements of free slaves. As mentioned earlier, the mountain was a place of refuge, and as Alice Maude noted “The negroes are now far better off than the poor whites used to be. But like the original white settlers, they too have reason for being there. Our Mountain is still a place of refuge for those who need it” (Maude, 1942). The residents of Aldie were aware of the two towns, Stewart Town and Bowman Town, primarily because they supplied important labor when the Aldie mill was in operation.

There is a little African American community up in the mountain, and they tell me the slaves hid in the mountain to get away from persecution: they were free but not free in a sense of somebody caught them. So they settled in the mountain and created Stewart town, and some other little towns. Some of their generations are still up there. The people up there furnished labor to the farmers. In August the water would dry up, the mud would fill the millrace, so truckloads of [African Americans] would come from the mountain and shovel out the mud (Mr. Muriel Partlow).

Though Mr. Partlow from Aldie and Robert Stewart, from Stewart Town, were friends, their childhood was during a time when whites did not socialize with blacks beyond working and public social settings. Therefore, it was later in life that Mr. Partlow had the opportunity to visit his friend Robert at his log cabin. Because Mr. Partlow had always had an interest in wild flowers, he recognized Robert’s knowledge of local plants and he very much valued his experience drinking sassafras tea with Robert and described it in detail:

But I sure would like to have a cup of that sassafras tea. He got up and poured some hot water in it and got it hot, put the root in there and got it boiling and then he took a strainer, he strained the water into the cup and gave it to me to drink. Another time I went up there and he had a lady slipper. It’s a wild orchid you know. He had transplanted one in his yard. I don’t think it lived because you got to be careful with a ladyslipper (Mr. Muriel Partlow).
I was intrigued to meet Robert Stewart after I heard this story. I was able to meet the two remaining brothers and one sister of the Stewart family, after whom the town is named. Mary Stewart, the sister, was the only one I was able to formally interview. When I showed up for the interview, she held in her hand sumac berries (*Rhus typhina*) and then shared with me how she remembered using them as a child.

Shoemac (Sumac) the berries come on it like a bunch of grapes and some we used to have it when you had a sore throat and you boiled the tea and gargle your throat in it. My mother used to make tea from the spicebush, well that would bring out the measles if you had the measles. We used to pick chestnuts, chinquapins, hickory nuts, mushrooms, but you don’t see much of the mushrooms now like you used to. Oh yeah, we had poke in the spring, but there ain’t none now (Mrs. Mary Stewart).

Certainly poke weed (*Phytolacca americana*) is still very commonly found on the edges where fields and forest meet but what I gathered from Mary in her comment is that in her mind because she no longer uses the plant, it is no longer present. I thought about this transition that takes place: if the plant is no longer a part of a seasonal tradition, and just a memory, then it is a short step away from disappearing in one’s mind even if it is still present in the local environment. From the perspective of a generation, it only takes one break in the link for the use of plants to go dormant. It is an extremely fragile connection that links knowledge of plants from one generation to the next. This topic reappears and is discussed in detail in the previous chapter.

I was also able to meet Mary’s brother, Mr. Robert Stewart, who lived alone in a log cabin, with tall blueberry plants growing in his yard. At my first visit with Robert Stewart in his log cabin, he was very kind, and invited me to return to share a cup of sassafras tea with him. But sadly he passed before I was able to do a formal interview. I certainly wondered what tales he may have shared with me, because he seemed to have had knowledge of medicinal plants that grew in the woods where he had lived his life. A bachelor like Jack Dawson, he had no one to
pass along his knowledge. Along with Mary Stewart’s comments of using sumac (*Rhus typhina*) and spice bush (*Lindera benzoin*) tea, and Robert Stewart’s use of sassafras (*Sassafras albidum*) tea, I pondered the thought that perhaps this community, slightly isolated within the mountains, had used medicinal plants more commonly, since I was unable to really record any use of medicinal plants among others interviewed. This may have been because it was a part of their historical circumstance, essentially a level of cultural isolation because access to medical doctors would have been more difficult. Ironically it may be that cultural isolation may be an insight into why knowledge of plants remains, or is less vulnerable to dormancy.

In my time interviewing and meeting people from these two towns, I sensed some hesitation as the interviewees answered me when I asked about use of medicinal plants. The first time this happened it caught me off guard, but then I thought about the possibility that the use of medicinal plants could be perceived as an association with poverty or even witchcraft. As the use of medical doctors replaced the use of midwives and the common practice of using wild herbs, those that could not afford such services perhaps associated the continual use of herbs and midwifery with poverty. This association was not just among African Americans but mountain people in general. During the 1930s, several studies looked at mountain people and the need to bring them into the modern world. One such study is infamous, as it was used in part for the justification of the removal and re-establishment of families to make way for the Shenandoah Park.

The sociological study entitled “Hollow Folk” (Sherman and Henry, 1933), which described the mountain dwellers as “unlettered folk, sheltered in mud plastered log cabins and supported by primitive agriculture” painted a dismal picture of poverty in the mountains. One can easily see how this study helped justify the relocation of people from the Blue Ridge to make
room for the national park. Current examinations of the material culture by Audrey Horning (2002) of these “hollows” are now revising history and the negative connotation of the people who once lived in the park. It now appears that they were not as isolated from the modern world at that time as once thought. They used patented medicines along with herbs, used modern technology of the times, and made enough on their farms so that they were able to sell goods to buy other nice things. Perception is often shaped by what is happening historically and socially at the time, and may or may not present a complete and accurate picture. Horning (2002) summarized her insight well when she stated “as elsewhere in the southern mountains, the Blue Ridge regional culture of the early twentieth century was a complex and ever-changing heritage with a multiplicity of roots.”

Even though the study “Hollow Folk” was biased, it offers us insights into the perceptions held by many people about mountain life at the time of the study. The study was conducted by the Washington Child Research Center through a research grant of $300.00 given by the American Home Economics Association. The research was instigated by a rural school supervisor who was concerned about ragged children that were thought to live way in the mountain tops of what is now Shenandoah National Park, about an hour’s drive west from the Bull Run Mountains. From reading the study it appears it was done with the intention of improving the lives of these children, but one can sense as well that there was a social bias that this way of life was no longer accepted in society. Looking beyond the social bias of the times the study does provide a vivid description of life in the five hollows that the researchers visited and in which they conducted tests.

There is a section in the study that describes how one woman was much respected for her knowledge of medicinal plants. A list is included with a few of her remedies and interestingly
enough one remedy is spice bush tea brewed from twigs to make the measles break out. This is identical to Mary Stewarts’s description, not only in the use but the concept of how it works as well (it ‘brings them out’). The researchers noted that though the residents claimed this knowledge was from “Virginia red men” the researchers thought it was unlikely due to the fact that there is scant evidence that the ancestors of the hollows had a contact with Native Americans. The researchers assumed that the customs of “primitive medical lore” were brought to Virginia by early Scotch-Irish settlers from Northern Ireland. It is interesting to note that in the list of medicinal plants compiled by the study, almost all of them are native species, which may put into doubt the theory that the medicinal plant knowledge came from Northern Ireland. It certainly leaves one to wonder how the knowledge of medicinal plants was integrated into mountain life, and what were the similarities of medicinal plant use among those that did live in the mountains of Virginia.

The study also reveals other interesting signs of the times in that the researchers brought in a chemist to take blood samples in order to study the malnourishment of the children in the region. The researchers were surprised at the results; out of the five Hollows studied, the children of the Hollow that was the most remote and “poorest” were in the best health and had the best teeth. This is interesting because it somewhat supports similar findings from a study by McDade (2007), who found that children’s health has a positive relationship to the degree of the mother’s ethnobotanical knowledge. One could hypothesize that residents of the most remote Hollow had more ethnobotanical knowledge among the women, which might explain the level of health among the children. The original 1933 study suggested that the better health among children of the more distance Hollow was due to a diet high in vegetables, especially cabbage and the fact that they were too poor to buy candy and white sugar. I found this aspect of the
study quite telling of the times and revealing to the changes taking place during the end of the 1930s. The researchers described these Hollow folk as if they are people of a different species with “the lowest level of social development” and though the language is offensive at times it does shed light on the social perception of mountain life at the time the study was conducted. The findings of the study though socially biased confirm the role of plants as knowledge and also reinforces the role of women as keepers of this knowledge. This has been reinforced not only through Mary Stewart’s interview, and the story of Simon Kenton’s Growing Tree, but also in the previous socio-economic chapter, when women’s work was described as tending the homestead.

5.4 Implications for Concept, Cause and Consequence of Dormant Ethnobotany

As with the socio-economic perspective, viewing dormant ethnobotany through the cultural lens by way of sense of place and folklore helps refine the concept, identify factors relevant to the transition, and illuminate the consequences of its decline in the Bull Run Mountains. Folklore tales of name-place legends define the Bull Run as having its own unique cultural identity. Conceptually, my interviews help identify ethnobotanical knowledge as an important element in the sense of place, a foundational aspect, in turn, of cultural identity. Mr. Partlow recalls how Miss Mary would take her Sunday school class into the hills giving those young minds a tour of the local wildflowers, and recounting the stories to them about Indians painting themselves with blood root before going off on the warpath. Without a deep sense of place, I doubt Miss Mary would have had the inclination to extend her classroom to include Bull Run’s forest.

Folklore reveals another concept relevant to dormancy—its role as a vessel for communicating plant knowledge from one generation to the next. This is very apparent in the
story of Simon Kenton’s growing tree and the survival of those stories for more than a hundred years. The stories also demonstrate that plant knowledge was seen as having significant power and there was special status in those who held this power.

Looking at dormant ethnobotany through this cultural lens also helps identify three factors that may have contributed to its decline. The first is cultural isolation, such as the case of Stewart Town and Bowman Town. The second was a change in necessity resulting in a change in power well illustrated in the folklore tied to the history of the mad stone. The tale of the mad stone illustrates this slow progression of the stone’s decent into eventual mythical obscurity as modern medicine began to play a larger role in rural communities. The third aspect is the social stigma and perceptions that are illustrated by the 1933 study “Hollow Folk.” It may be hard to imagine now but in those changing times the old mountain ways were apparently looked down upon. With this in mind one could see how the use of herbal medicine especially in African American communities could very well have been associated with poverty. It then becomes clear that the years leading up to the 1940s were a time of transition as people changed, adapting to new ways of living. The necessity of plant knowledge is no longer perceived as social/cultural power due to the fact that it was no longer important to everyday life.

As a close to this chapter I want to return to Mary Stewart, one of my informants/interviewees, and how the consequences of dormancy are well illustrated by her memory of poke weed, and her belief that it no longer exists in the wild because she no longer uses it. Her statement is important because her perception had changed in regard to pokeweed and perhaps in regard to the use of all wild plants that she was familiar with as a child but that she and those of her community no longer use. This relates to the core of the manifestation of culture because values equate practice (e.g., Figure 10). Hofstede (1991) stated, “The core of culture is formed
by values. Many values remain unconscious to those who hold them. Therefore they often cannot be discussed, nor directly observed. Value can only be inferred from the way people act under different circumstances.” Once the practice of using plants ceases, the core values that place plant use in the cultural setting also cease. Hofstede (1991) goes on to say that “the true cultural meaning of the practice is intangible; this is revealed only when the practices are interpreted by the insider”.

Though this chapter begins with the retelling of local folklore it also addresses how the decline in plants resulted in part due to a change in necessity and as well a change in perception that was perhaps brought on by a social stigma regarded towards mountain life during the 1940s. It also suggests that the loss of storytelling occurred not long after the WPA folklore study took place, since no one I had interviewed ever mentioned these stories. Had the WPA folkloric study not been conducted would the stories about Simon Kenton have survived? We each have our own story and as Thomas Berry (1988) so eloquently stated, “It’s all a question of story. We are in trouble just now because we do not have a good story. We are between stories. The old story is no longer effective”. In this quote Berry affirms the relationship of cultural identity to cultural narrative, a role that folklore filled in the Bull Run Mountains. It appears that when the stories or folkloric tales are no longer told the vessels that carry plant knowledge within them are then broken. This theme of the fragility of plant knowledge reappears in the cultural perspective as it did in the previous chapter.
Chapter 6. Dormant Ethnobotany from the Ecological Perspective

November 22, 1936, Allard is taken back by the surprising beauty found in the color of the broomsedge and sumac. These plants, though commonly seen, strike Allard and he goes on to share a philosophical perspective as a naturalist. Allard was a botanist and naturalist who explored this region in the 1930s.

“I have always felt that every plant and flower and landscape view must be seen from a particular vantage point and at a particular moment if one would behold it’s rarest beauty. The artist is eternally aware of this and the poem and painting become its heightened expression. This as true of science as of art for the scientist must guard his approach if he would find the way to truth. There is but one highway to truth and beauty and that is gained through sincerity of thinking, feeling, and doing.”

August 6th 1940 Allard makes the following comment in his journal from his home in Arlington. “There is no greater satisfaction than to wander into the remoteness of the hills and mountains, searching out the plant life and its ecological relations.”

In essence, ethnobotany is the study of human interactions with plants. Understanding the effects of these interactions on the abundance, distribution, diversity, succession, and evolution of plant communities is, in turn, one of the foundations of the science of ecology. Knowledge dictates the patterns of such interactions with local ecology. As such, considering dormant ethnobotany through the ecological perspective is an important step in deepening our understanding of the concept, its causes, and its consequences. In fact, an emerging branch of dynamic ethnobotany is devoted to this task. As suggested by Hunt (2000), ecological ethnobotany can be defined as the “relational study of people’s interactions with plants as situated in an ecological and social context.” Importantly, ecological ethnobotany shifts the focus from simply the use of plants by people to the relationship between people and plants, thus including how plants respond to people’s use or lack of use.

My analysis follows suit by characterizing the use of plants and the ecological facets of the relationship between people and plant use in the pre-dormancy era. By doing so, I enrich the
concept of dormant ethnobotany previously developed through the socio-economic and cultural perspectives. I then explore what the ecological perspective can teach us about the causes of dormancy in the Bull Run Mountains. While it is certainly possible that ecological changes on the landscape influenced the degree to which plants were gathered and put to use, there is little record of this occurring except for the American chestnut blight during the transition period. Rather, I trace the decline in ethnobotanical knowledge in the Bull Run Mountains to the emerging conservation movement in the U.S. and regionally in Virginia as a movement that put far greater emphasis on establishment of nature preserves free of human influence than on recognizing the often beneficial role human interactions with plants and the landscape had on sustaining biological diversity. Next, I discuss the ecological implications of dormancy. Human activities and interactions with plants have resulted in disturbance patterns in the landscape, and at the individual species level have involved tolerating, gathering, encouraging, protecting, and cultivating specific plant species, it is these relationships that have declined in the transition period. Of these various degrees of interactions, there were both predictable and unpredictable ecological effects on plant communities and patterns in the Bull Run Mountains.

My methods include a descriptive comparison of ecological data and plant species composition over time, along with interviews and a review of historical accounts. My comparative ecological analysis begins by revisiting H.A. Allard’s time (1940) botanizing in the Bull Run Mountains and what he was observing at the start of the transition time. This sets the stage for a more detailed ecological understanding of the mountains as Allard’s notes and published research are compared to Gary Fleming’s (2002) more current examination of the mountains flora. I then use interview data from my informants and review records from Bull Run’s conservation history in combination with these ecological studies to explore fire and
foraging – two key human interactions that were part of Bull Run’s ecological history and the ecological consequences of dormancy, which was associated with the loss of these interactions on the land. As before, I conclude with a synopsis of what the ecological perspective contributes to the concept of dormant ethnobotany and the understanding of its causes and consequences.

6.1 Ecological Comparison over a 50-Year Period

Harry A. Allard’s (1880-1963) fieldwork set the historical context for the ecological perspective, and provides a further confirmation of the transition to dormancy. Few botanists have contributed more to the knowledge of plant distribution in Virginia and West Virginia than Allard, who published some 55 papers on the subject, and several of those papers in collaboration with E.C. Leonard, who helped with plant identification but rarely with fieldwork. Allard, a plant pathologist working for the Department of Agriculture, would travel to the mountains on the weekends. Ashley Gurney (1964) a frequent companion on these trips described they would leave Arlington, Virginia, in the early morning, and as they drove Allard made entries in his notebook concerning plants in flower, or other observations, “meanwhile regaling with me past experiences or deploring the ills of the world and the evils of too rapid change.” Carrying with him a plant press, and cigars for men with whom he had become acquainted, Allard made these trips to the Bull Run Mountains religiously from 1933 to 1952. The first eight years he made close to 55 visits each year, and claimed to have exceeded 3,000 miles of actual walking (Gurney, 1964). He also collected more than 15,000 herbarium specimens of vascular plants and lichens that are preserved at the National Herbarium in Washington, D.C. The total vascular flora represented by Allard’s specimens found in the Bull Run Mountains approaches 1,100 taxa, which is impressive for an area as small as the Bull Run Mountains. Allard published the results of his work in the Bull Run Mountains in a series of papers (Allard 1940, 1942, 1944, 1961: Allard and Leonard 1943, 1944, 1952).
Fortunately, I was able to track down his journals at the Southern Historical Collection at the University of North Carolina Library, where he attended school. He was a naturalist by all accounts, and his journals are more concerned with his observations of changes in the landscape versus human accounts. He did; however, comment on abandoned homesteads and squatters that took advantage of these places. He also recognized that mountain people were suspicious of strangers and he made a point to avoid those areas that were known for stills. His journals are filled with several observational descriptions of successional stages. These two observations link the transition time period because as people were leaving the mountain and abandoning their homesteads, various stages of succession where present in the transition from farm to forest and this certainly marks the initial phases of the transition from dynamic plant use to dormancy.

From Allard’s descriptions in his journal along with sketches of where he parked I was able to locate 6 of the most common spots that he routinely visited to conduct his plant studies in the Bull Run Mountains (Figure 13). For comparison purposes these reference points correspond to the general locations of Gary Fleming’s study that consisted of 72 plots (Figure 3). Though Allard is primarily focused in his journal on observations of nature and the plant species that he encountered and collected for his herbarium; however, he does make notes about the changes that were taking place in human use of the land at that time. The many abandoned homesteads he encounters in his journals document this change that is taking place in land use. The six locations that Allard most regularly visited are: 1) Riley’s cabin, 2) Dawson’s homestead, 3) House by sharp turn, 4) Stone fence and quarry, 5) Matrimony vine, and 6) Spring (Images from Allard’s journal are included in Appendix 2).

On April 24th, 1935, Allard noted next to his sketch “Walk led from old mill at thoroughfare Gap north by old ruins on to a country road, thence into fields at right where an old
house stood with chimney and walls, cellar hole with Matrimony Vine, thence back to road way”, this is noted as location 5 on Figure 13. Location 4, Stone fences and quarry, included a sketch that Allard made with several notations to old homesteads in the mountains. He notes: old abandoned cabin, old field now in corn, fence row, flag stone quarry, fence row with peach tree, fallen black walnut tree, and old home site. These observations that Allard makes in his journal thus confirm, as addressed in Chapter 3, the transition that had begun to take place in the Bull Run Mountains. Allard’s observations are not necessarily direct evidence of the transition to ethnobotanical dormancy, however, they clearly establish a demographic transition of farm abandonment that was taking place during the transition period. It is clear that Allard’s observations of the landscape provide evidence of the socio-economic and cultural transitions that are linked to broader transitions that are happening in the region.
I highly suspect the reason why Allard was fascinated and dedicated to studying the Mountains was because of this transition that was taking place. Allard was interested in the succession from field to forest and documenting specifically what species were most dominant in
colonizing the landscape and why, thus the transition period was an ideal opportunity. The overall state of the Mountains was best summarized in his statement, “at the present time there is probably no area in Virginia that shows more striking and beautiful stages of succession trending toward the climax forest than does this area” (Allard and Leonard, 1943).

When Allard initiated his botanical survey of the Bull Run Mountains in 1934, he was making his observations of a landscape in transition following a number of area-wide disturbances (Fleming, 2002). Most significant to the forest, going back twenty years earlier was the introduction of a fungal pathogen that infected large populations of the dominant over story species, the American chestnut (*Castanea dentate*). Allard makes the observation that hickory (*Carya*) saplings had appeared in enormous numbers even in pure stands of chestnut oak (*Quercus montana*) indicating the possible future replacement of what was once predominately an oak-chestnut forest with an oak-hickory association (Allard and Leonard, 1943). Certainly the loss of the American chestnut offered other species an opportunity to fill this ecological niche. The plant community study, conducted by Gary Fleming, in 2002, provides a detailed look at the unique community types within this general classification, and allows for a detailed comparison of the change that has taken place over the last 50 years, the time frame between Allard’s published studies and Fleming’s more recent evaluation.

Allard (1942) describes much of the remaining forest as “cut-over woodland” and noted, “even the older woodlands represent succession forests following many cuttings and burnings of the original primeval forest cover” (Allard, 1961). This remark implies the constant use of the landscape since the 1720s beginning with the earliest land grants and settlements, and most certainly before that the use of the landscape by the original inhabitants, members of the
Manahoac tribe of Sioux stock, and referred to as the Dogue (Fauquier County Bicentennial Committee, 1959).

The transition period from dynamic to dormant plant use resulted in abandoned agricultural lands and homesteads that Allard often mentions. Allard’s observations documented “hundreds of acres on the lower, more cultivated slopes that have reverted to the wild grassland stage in which little blue stem (*Schizachyrium scoparium*) is almost pure dominant” (Allard and Leonard, 1944). In the past the tenure of these grasslands was often prolonged by fires, which eliminated the seedlings and saplings of woody invaders (Allard and Leonard, 1943).

Grasslands were not the only transitional stage in the process that took place from field to forest. Soil and topographic conditions resulted in the presence of various species that were opportunistic, and in addition represent secondary stages of succession. Allard and Leonard (1943) reported pure stands of black locust (*Robinia pseudoacacia*) that had invaded abandoned pastures around old homes sites from the early 1900s. Tulip-poplars (*Liriodendron tulipifera*) were found in the more mesic sites, while the drier sites located mostly along the lower slopes of the Eastern edge of the mountains were dominated by stands of Virginia pine (*Pinus virginiana*). Certainly what Allard’s descriptions paint are a picture of various transitional patches present in the landscape that had begun the process from field to forest starting as early as the 1900s and also just starting to take place during his time out in the field. Allard is also observing contemporary use of the land by squatters, documenting recent fires, and those fields that were planted in corn. “The soil in the deep interior valleys is too poor, and steep and rocky to encourage profitable farming operations. A few rather pretentious stone or brick houses, built long ago in favorable locations, have been abandoned and left in ruins or burned. Many log cabins were to be found in some of the coves, but these, too, were abandoned and destroyed,
although squatters took some over from time to time. In the past years, it was not unusual to find stills in the area” (Allard, 1961).

Gary Fleming’s (2002) study of the ecological communities 50 years later provides quite a contrast to Allard’s historical observations. Overall scrutiny of aerial photography confirms that between 1952 and 1997 that the Bull Run Mountains are more completely wooded than they were in 1952 (Fleming, 2002). This is due to the successional communities Allard encountered continued to advance and mature, as most mountain-slope fields became forested, and extensive old-field stands of Virginia pine (*Pinus virginiana*) were replaced by hardwoods. Furthermore few native grasslands remained that consisted of native warm season species such as little blue stem (*Schizachyrium scoparium*) and broomsedge (*Andropogon virginicus*). Allard had observed these species occupying hundreds of acres. In the absence of fire former grasslands, taken over by young forests or converted to cattle pastures and hay fields, tended to support exotic grasses such as meadow fescue (*Festuca pratensis*). This has resulted not only in the loss of grasslands of native warm season grass, but also the decline of grouse, as noted in my interview by Mr. Allen Glick.

The map identifying the locations most visited by Allard compares very closely to the location of Fleming’s (2002) study of the Bull Run Mountains, which was based (methods are described in Chapter 2) on his 72 vegetation plots (Figure 3). Fleming, detailed in Chapter 2, identified ten distinct plant communities. The biogeographic affinities of the study area’s community types are overwhelmingly Central Appalachian. The Bull Run Mountains and other western Piedmont monadnocks are geological and biological outliers of the Central Appalachians. Two community types, Basic Mesic Forest and Basic-Hickory Forest, have similar ranges found in both the Piedmont and the lower- elevations of the Blue Ridge, and one
community type, the Mesic Hardwood Forest has a range that is found in both the Piedmont and Coastal Plains. This is not surprising since the location of the Bull Run Mountains, as mentioned in Chapter 2, describes in detail that the Bull Run Mountains exist on the edge of a larger landscapes divide between the coastal piedmont and the mountains.

An overview of the 10 plant communities identified by Fleming (2002), provides a distinct description of the Bull Run Mountains as they are today. The descriptions of these plant communities are not exhaustive but do provide a general overview. The relevance of describing the 10 plant communities is to provide context on how the mountains have responded to 50 years of dormancy, in regards to ethnobotanical interactions and furthermore to point out how these 10 plant communities were relevant to human use and interactions. For example, Mountain/Piedmont Acidic Seepage Swamp is a community that was very important to early historic homesteads in the Bull Run Mountains. These homesteads were entirely dependent on springs and streams for domestic water, evident by the remains of many spring houses found in this community type characterized by red maple (Acer rubrum) and tulip poplar (Liriodendron tulipfera), as well as plants and shrubs, such as cinnamon fern (Osmunda cinnamomea), winterberry (Ilex verticillata) and skunk cabbage (Symplocarpus foetidus). This community type is a non-alluvial wetland, which means it does not have alluvial soils and is not subject to seasonal flooding and is more typical of those areas with alluvial soils.

Acidic ravines and slope forests include four different community types as identified by Fleming (2002). The Mesic mixed Hardwood forest community type that is associated with infertile ravines, lower slopes and well drained flats along streams. The dominant tree is the beech (Fagus grandifolia). Interesting to point out is that young beech trees have spread over the years, and one explanation for this could be the result of fire suppression, since its thin bark
as a sapling is easily killed by fire. It is, however, the most shade-tolerant of the hardwood species, and also one of the longest living of the tree species found in the Bull Run Mountains (Fowells, 1965). Most likely, because beech has no value in regards to timber there are species thought to be more than 150 years old along Catletts Branch. Acidic Oak-Hickory Forest is dominated by the chestnut oak (*Quercus montana*), white oak (*Quercus alba*) Pignut Hickory (*Carya glabra*) and flowering dogwood (*Cornus florida*). The “Eastern Hemlock-Hardwood Forest” is found in only two locations, that share similar sheltered land-form with a northern aspect. This creates a cool micro-climate that supports eastern hemlock (*Tsuga canadensis*), currently at risk of disappearing from the mountain, due to the introduced asiatic insect, hemlock woolly adelgid. The Low Elevation Boulderfield Forest/Woodland community type is scattered throughout the study area and defined by the extremely large boulders that were never cleared to make way for agriculture or logging because of the shear size and rugged terrain.

Basic Mesic Forest covers substantial areas of the Bull Run Mountains and is recognized by the prevalence of nutrient-demanding plants, found in more moist, lower slope reaches of the mountains. Examples of plants one might find are wild ginger (*Asarum canadensis*), a local medicine, and paw paw (*Asimina triloba*), a native fruit. Rare spring wildflowers like the yellow lady’s slipper orchid (*Cypripedium parviflorum*) would also find its habitat among the rich soils. Furthermore because of the fertile soil these areas were the most productive in the mountains, and most all areas within this community type were cleared or cut over in the past. Sample plot locations that have recovered from agricultural uses were abandoned at least 100 years ago, and some may have been among the many Virginia fields abandoned during the Civil War (Fleming, 2002). Dominance of tulip poplar is indicative of the fact that these areas were once open due to agricultural fields, heavily logging and/or some sort of natural large-scale forest disturbance
because tulip poplar is known to invade oldfields. Contrasted to the Basic Oak-Hickory Forest where the soil is less fertile, drier, and found on middle to upper slopes, this community type would have been less appealing for human use, other than selective logging. The presence of wood debris and living root-sprouts of American chestnut indicate that as Allard had observed the forest was shifting from an Oak-Chestnut to an Oak-Hickory community. This forest community would have been the dominant area that the American chestnut prevailed before it was wiped out by the blight.

The last three community types described by Fleming (2002) are located in subxeric (somewhat dry and drought prone) to xeric (dry; drought prone) location with infertile soils along the high ridge top of the mountains and are considered pyrophytic, meaning that species have specific adaptations to ensure reproductive success in a frequently burned environment. The Table-Mountain Pine-Oak Heath Woodland includes Pinus pungens, a species with a serotinous cone. The cones remain closed until triggered by heat to release its seed as a reproductive adaptation that ensures seed dispersal under optimal conditions. The Pitch Pine-Oak Heath Woodland consists of Pinus rigida that also employs serotinous cones and the ability to sprout prolifically from fire injured stems and branches. The Chestnut Oak Forest is the most wide spread community type found in the mountains. Because the soil is dry and not very fertile this part of the landscape was not suitable for agriculture but large stumps indicate that this community type was heavily logged. Additionally, significant evidence of Castanea dentata in one plot location commonly known as “Shooters Hill” suggests, that this community type was perhaps also once dominated by American chestnut. At “Shooters Hill” there was essentially a grave yard of Castanea dentata, where fallen chestnut trees lay on the forest floor most likely that were cut but then left because they were hollow and useless for harvesting the wood. Also found
in this community type are large areas of Mountain Laurel (*Kalmia latifolia*). Allard remarked that the Bull Run Mountains could have been named the Heath of Kalmia Mountains (Allard and Leonard, 1943). Furthermore this community type also supports large stands of Low bush blueberry (*Vaccinium pallidum*), and other native berries such as black huckleberry (*Gaylussacia baccata*) and deer berry (*Vaccinium stamineum*). The most striking thing about my time with Gary Fleming in the field collecting data from over 72 plots was the feeling that you were in an intact-forested landscape that seemed to have been there forever. The only insights that the landscape had been dotted once with homesteads were stonewalls and remnant chimneys that were still standing. The ability for the landscape to return to forest, and in the process maintain a diversity of species, such as the 10 plant communities Fleming identified, was astounding. That said, the suppression of fire, the loss of native grasslands, and the return to a primarily forested environment, are indicative of plant use in a state of dormancy in the Bull Run Mountains.

### 6.2 Human-Plant Interactions

My informant interviews, the historical record, and notes from Allard’s field notes provide documentation about the use and ecology of plant use in the pre-dormancy era in the Bull Run Mountains. They also provide insight concerning how plants were perceived. Davis (1995) described the importance of not just understanding how plants are used but also how they are perceived. Davis discussed how perception influences the activities of people and how in return those activities influence the ambient vegetation and the ecosystem. I have applied Davis’ task to the quotes that capture memories of foraging but what is slightly different in this case study is that I was looking through a different lens, the past tense. I was applying the same questions as Davis but looking at how plants were important to these past memories, how the perception of plant use impacted the change in plant use activity and how this change has influenced the local ecology. I have organized my discussion of the use and cognition of plants
in the pre-dormancy era in the Bull Run Mountains around two key human-plant interactions during that period: foraging and the setting of prescribed fires.

6.1.1 Foraging. The Bull Run Mountains is currently mostly wooded but few understand what the woods have to offer in terms of survival via foraging. Most of the memories shared in the interview data relating to plants were primarily associated with what was grown in the garden or farmed in the fields. However, the people that did live in the mountains were in ways folkloric for the special knowledge that they acquired, for they had to know how to survive by their close connection to the woodland resources. Mr. Partlow, whose family ran the local store in Aldie, shared a story about two men who were known to wander the Bull Run Mountains freely, and in a way these two men were folkloric for those that reminisce about life in the mountain.

I don’t remember what it was about but “lost John” was brought into the store. I forget why and what the charge was, anyhow, I didn’t pay a whole lot attention until lost John (Figure 14) said he was going to come back and play his juice harp for me. And sure enough he played this tune, talked a bit and left…They called him Lost John because no one knew where he was or didn’t know anything about him, and there was another one, used to call him Jesse James of Bull Run Mountain he was a stone mason, his other nick name was Cappy Smith (Mr. Muriel Partlow).

Figure 14. Photograph of Lost John. Lost John is a character from stories of folklore based in the Bull Run Mountains. (Stoval, 1980).
Lost John was someone that I have heard about on several occasions. In 1980, he was photographed for a study specific to the mountain (Stoval, 1980). Since he passed some time shortly thereafter, I did not have the opportunity to seek him out. People who knew him said he lived a mysterious life in the Bull Run Mountains and was known to wander, make his own shelter, and survive off what he could forage for on the mountain. I was, however, lucky to get to know what I consider the last mountain man of the Bull Run Mountains, Mr. Jack Dawson, mentioned earlier. I first met Jack, as he was called, several years ago when I went to collect macro invertebrates from the headwaters of the Hungry Run Stream near his house, deep in the woods. Instantly, I could tell Jack loves living in the mountains, having spent his whole life in the same house where he was born. Though he was not one to forage so much, he has a keen eye and awareness for the wildlife around him, as well as those plants that individuals would seek.

Jack’s favorite past time seemed to be reminiscing about the Civil War and the folklore that surrounds another infamous character that once roamed the mountains, John S. Mosby (1883-1916), known as the grey ghost. I think that Jack liked to talk about the historic adventures of Mosby and his rangers because the stories would have been told to him by his Grandfather’s generation, and perhaps reminded him of his time hearing these stories as a child when his family lived with him. Jack claims his great grandfather was a stonemason that worked on Beverly Mill, the mill that is still standing on the southern end of the mountains, and was constructed around 1742, and later enlarged in 1758.

Jack’s spirit is very gentle, even though he has remained what some would consider a recluse and a bachelor all his life. There is a strong sense that as he talks about his life in the small house deep in the woods, he is a mutual creature among the animals of the forest that surround him. Visiting Jack is the closest thing to stepping back in time that I was able to
experience in my course of interviews and research. Spending time with Jack was like having the opportunity to gain a sense of what life was perhaps like without the conveniences of cars, cell phones, and many other modern amenities.

Along the way, my encounters with Jack helped me think about the how qualitative methods merge with ethnobotany in an effort to address deeper questions beyond just the documentation of names and uses of plants, such as how plants affect our lives in ways that are not always obvious. These are questions not easily answered. There is no formula or chart; these questions are to be observed and contemplated. My experiences with Jack created that opening for me, allowing me to appreciate his love for the mountains through his experiences of living off what he has in his yard and in the woods that surround him. His choice to continue to stay and live in the house where he was born makes him the one person that I interviewed that still had a deep and obvious connection to his environment. Because of his choice to spend his entire life living in the same house, it was as if his world remains the same while the outside world radically changes around him. Surreal boxwoods that have grown ten feet tall surround his house. It is hard not to feel the protection that they have afforded over the many years that Jack has lived there, with a picture of his mother hanging over the antique bed not far from the woodstove that heats the house.

I was able to make several visits to Jack’s house (Figure 15) from 2004 to 2008. I was always taken aback by my visits, because each time I saw and experienced something new, in part because my visits came during different seasons. This gave me insight into how Jack’s activities each season were different. In the spring he was collecting wild greens and seeding his garden, in the summer he was living off his garden and the fruit trees in his yard. In the fall he was splitting firewood, gathering fallen black walnuts, and in the winter he had a big bag of dried
corn on his porch that he was using to feed the wild animals, essentially to help them through the winter.

![Figure 15. Photograph of Jack Dawson and his house. This image shows Jack (left) and a wheel barrel of collected black Walnuts with tall boxwoods in the background and his mountain home (right).](image)

Certainly foraging for various foods and herbs in the mountain depended on the seasons, and many others who were interviewed shared how the seasons dictated those activities spent foraging, harvesting and storing food for the winter. These activities, certainly as they are remembered, describe a connection to the land, as well as a descriptive sense of how the seasons provided various opportunities for subsistence living. This is an obvious connection, how the season once dictated the use of plants in the Bull Run Mountains. The quotes, especially those from Jack seek to capture a connection to plants that was dependent on observations, use and necessity.

The spring, as one can imagine, is a fond time, and fresh spring greens that could be found were not only nutritionally important but also certainly treasured and enjoyed. Jack was especially enamored with the fact that one might pay for these greens in the store when you could just go out and pick them yourself. Certainly, he understood how something so basic to mountain life could now be a current trend, and in a way a taste for the past.
Everyone was after wild mustard- young poke and watercress, now you pay for them in the stores, this you would cook with a piece of meat (Mr. Jack Dawson).

Mrs. Douglas, remarked that her husband perhaps bartered or paid for those greens that people brought to the mill. Wild mustard (*Brassica kaber*) and other greens were brought to the new world by settlers and essentially naturalized over time, whereas young poke weed (*Phytolacca americana*) is a native plant. Though mustard, cress, and poke were the plants mostly mentioned by those I interviewed, other edible wild greens that grow in the mountain include dandelion, chickweed, and lambs quarter, to name a few.

When I grew up there was cress, wild cress. In the spring you’d go out with a big bag and you have cress on some of the fields that had it and when my husband ran the mill, all the people would bring in a big bag of cress and you would give em some money for it. I think he paid or maybe they just gave it to him, so we had cress too and that was real good. Wild cress would grow in the wheat fields. And poke too when its real young, the little leaves, they make good greens, I always had that. You cooked it like spinach, until it was tender with a little vinegar over it when you ate it, but it was good (Mrs. Sara Douglas).

Summer time beyond the garden provided opportunities to gather berries. Native wild berries that can be found are the high black berry (*Rubus frondosus*) and the black raspberry (*R. occidentalis*). Higher in elevation there are native species of low bush blueberries (*V. pallidium*), deer berries (*V. stamineum*) and huckleberries (*Gaylussacia baccata*). Wine berries (*Rubus phoenicolasius*) are not native and have naturalized themselves in ditches and disturbed areas, since being introduced in 1890 as a breeding stock for new Rubus cultivars (Swearingen, 2009). Considered to be an invasive species and a conservation threat to native plants, wine berries are still prized for picking since they are sweet and easy to harvest. Jack recalls that those that picked wine berries could sell them, and he also recounts the risk one takes in entering the thick areas of huckleberries where they grow close together.
Wine berries a dollar a gallon is what you would get if you picked em. Huckleberries are small and you got those chiggers if you would go picken down your hide (Mr. Jack Dawson).

Jack seemed too often express how things have changed. When I would ask him various questions about plants that he may have harvested for food, he was quick to quote the cost of things in the past, and how things that you gathered for free you could now buy in the store for a much higher cost than back in the day. Jack often referred generally speaking to back in the day. I am guessing that when he makes this reference he is referring to his twenties and thirties, placing his reference to about the 1950s.

Gallon of cider cost you ten cents back then and you could get 5 pd of flour for a quarter (Mr. Jack Dawson).

As fall approached the fruit trees ripened along with the nut trees. Apple trees were especially common on the mountain. Going back to the earliest land tenure contracts, there are references to how many apple trees needed to be planted in order to farm the land. Apples were important not just as fruit but a source of vinegar that could then be used to preserve other foods, a cooking agent in the kitchen, as a folk medicine that was noted to cure about anything, and even as animal feed.

There were mostly apple orchards back then, everyone grew apples, you would grind them up, put them in a barrel, it would turn to vinegar, wine was made with grapes and with out sugar it would not stay sweet very long in the hot weather (Mr. Jack Dawson).

When I asked about other fall food that could be foraged, Jack recalled Paw Paw (Asimina triloba) and Persimmons (Diospyros virginiana), as well as Chinkapin (Castanea pumils) and Black Walnuts (Juglans niger).

I knew a woman who would come to the country in the fall to look for Paw Paws, and to make pie with persimmon. And them eat cat tail roots in the fall like candy, cat tails grow this tall in wet places…. Young boys would pick the chinkpins, you
eat em fresh like chestnuts, you can eat em faster than you can pick em, one man came from the city and he just buy em all, he asked where you find em, well there on Chinkapin Hill (Mr. Jack Dawson).

Chinkapin Hill is one example of how significantly important plants are identified in the naming of place, as addressed in chapter five. Chinkapin Hill was also infamous for many tragedies that had taken place there. Out of the many stories collected by the WPA twenty-one of them where spirit dog stories, all of them collected from Appalachia except for the one from Bull Run, “The Ghost Dog on Chinquapin Hill” (Murray, 1942). According to Barden (1991) the spirit dog going back to ancient mythology is often identified as the gatekeeper of the afterworld. So for those that had misfortune at Chinkapin Hill, a mysterious black dog thought to be a ghost was known to appear at night, never causing harm but leaving behind the legend as it disappeared into darkness.

As winter approached, seeds from the garden were collected and dried for the following year, apples were cut and dried for future use, and various methods were used to store root vegetables, cabbage and onions to carry over through the winter.

Well walnuts you gathered in the fall and let em dry out and you had to get the hulls off of ‘em and that was a big job to crack ‘em and get the nut meat out, but that’s what they did on the farms. What my mother did with ‘em...when it was time to make fruit cake for Christmas is when she had to have a certain number of walnuts to make fruitcake (Mrs. Sara Douglas).

To dry apples- my mother would slice and peal-em, I hated to do it. I remember my uncle put too much water in the pan and it swell up, you would dry em and then when you were going to make pie you would cook em. In the winter you would dig a hole, put apples, potatoes, parsnips, cabbage and onions. My favorite dish salted fish in the wintertime. Corn, onion, lettuce and seed for beans, like the pink specked bean, people collected and kept their own seed and planted it (Mr. Jack Dawson).

There was an understanding of how things worked in the mountains, a simple perspective from a life spent observing and living among all other creatures wild and tame. The concept of
change is also evident; as there was a dramatic shift as people changed the way they lived during the critical transition period of the 1940s and 1950s. This comes across particularly well regarding consumption of wild game that people do not eat as commonly today. When Jack was growing up, one hardly saw deer in the mountains, and now the deer are a conservation issue, as the population has dramatically increased, eating the herbaceous layer of the forest and threatening rare plant species (Fleming, 2002). As with foraging, hunting by homestead families helped keep native wildlife populations in check.

Pole cat cabbage, this you would use if you broke out in a rash- you know wild turkey will eat the roots of the pole cat cabbage in the winter time, and people well they would eat ground hog, squirrel, rabbit, there were no deer back then, I’ve been feeden deer when she was small looking in the door in the morning, she come every day in the winter….I don’t see it no more, bees in the hollow beech tree. Bees will fight you to make enough honey to carry them over through the winter- so many people would kill by smoking em to death. I didn’t believe in that (Mr. Jack Dawson).

In looking back over Jack’s quotes it is apparent that he is aware of not only social changes but also what is happening in nature through his observations of wildlife, such as how turkey eat the roots of pole cat cabbage, more commonly known as skunk cabbage (Symplocarpus foetidus). He also mentions that he does not see bees like he used to, and expressed concern that bees needed honey to carry them through the winter, and to steal this honey meant death to the hive. Certainly it was not only the human inhabitants of the mountain that had to prepare for the winter but the wildlife also need to strategize for winter survival. Living in the mountain for so long has made Jack aware of these things; as he has been a witness to change over the seasons and throughout his many years living in the Bull Run Mountains. His observation skills are an example of the intangible benefits of an ethnobotanical relationship to our local environment.
Beyond timber used for building and fencing, there are many other wild plants that have uses, which are often referred to as non-timber products. Other than the references to black walnuts, chinkapins, and certainly the wild greens found in the fields and forest edges, I wondered about the foraging for other species found in the forest. Jack’s oldest sister, Mrs. McClaughty who left the farm as a teenager to go live with relatives after her mom died, shared vague memories of her father picking mushrooms to sell, as well as native ginger root.

My father picked mushrooms to sell and ginger root, well he always sold all of that stuff (Mrs. Elizabeth McClaughty).

This was one of the few remarks I found that mentions the harvesting of herbs and mushrooms from the forest. One could hypothesize that the knowledge of living off the forest, or more specifically, knowledge of non-timber products from the forest, was next to go dormant after the loss of folklore, in comparison to those stories that people remember regarding their livestock and cultivated gardens, that were more common in the socio-economic perspective. Knowledge of the native species also seems to be directly tied to the ecology of the Bull Run Mountains then that of the cultivated garden.

Jack Dawson did mention that I should contact his niece because she had a white oak basket that was made by his father, and he indicated that his father made these baskets often (Figure 16). Mary Ann, Jack’s niece, allowed me to come over for a visit and take a picture of the basket given to her by Jack. She told me her uncle Jack’s father was a prolific basket maker and was sad to report that most of them were sold off at a yard sale by a distant relative. She held the one basket with great admiration and treated it like a prized family heirloom. I felt very fortunate to have located the single basket, but I also felt sad wondering what other handicrafts I may have been able to discover had this research taken place several decades ago.
6.1.1 **Fires.** Fires intentionally set to increase the population of useful plant species brings the discussion of mountain life among the forest full circle by illustrating how ethnobotany can be a part of a living cultural ecological system (Hamilton, 1995). I was only able to capture a few quotes that related specifically to intentional fires in the Bull Run Mountains, such as the use of fire to maintain the blueberry population. Jack recalled how a fire that was purposely set to increase the blueberry harvest got out of control.

Back in 1937 for 12 hours all the people were fighten it for ten cents an hour, a man set the fire so there would be more huckleberries up near hungry run, old man Roger Elgins organized everyone to fight the fire (Mr. Jack Dawson).

From Jack’s quote it appears that fire was used in the Bull Run Mountains to increase the native blueberries and was most likely also used as an effective method to clear forests and fields as well. If the opportunity had been there to conduct interviews 50 years ago, I believe there would have been many more references to many different ways that the use of plants in the mountain and the forest more specifically created a deeper connected living cultural ecological system. As these systems change from actuality to mere memories it becomes the role of the conservation community to evaluate how these systems have affected the ecology and if it is in the best interest of the local ecology to revive some of these lost cultural ecological systems.

A similar ethnobotanical inquiry that addresses the role of fire is Anderson’s (1991) research with the Miwok people in California. Ethnohistorical accounts combined with
ethnographic interviews were applied in an attempt to determine the cultural interaction between red bud and the Miwok people. Western red bud (Cercis occidentalis) was highly valued as a source of material for basketry. The use of anthropogenic fires, pruning, and weeding not only historically maintained the red bud populations; it also enhanced its range and distribution. Anderson points out that the current burning laws have greatly reduced this human-plant symbiosis.

The indigenous inhabitants of the area between the Piedmont fall line and the Blue Ridge, where the Bull Run Mountains reside, were descendents of the Sioux stock, and thought to be that of the Manahoac Tribe, referred also by local historians as the Doeg or Dogue (Ewell, 1931). These and other Native American tribes often used fire as a tool for hunting, range management, and agriculture, that resulted on open forests and savanna-like vegetation that was dominated by fire-tolerant species (Brown, 2000). In the Central Appalachians, it has been documented that fires were also used deliberately to burn off fields or blueberry patches (Clarkson, 1964; Van Lear and Waldrop, 1989). Fires that occurred by nature’s hand from lightening in the Bull Run Mountains, especially in the dry exposed ridges, or by human intention or accident have happened so regularly over time that plant species that have fire adaptations, such as the pitch pine (Pinus rigida), are commonly found on the ridge tops of the Bull Run Mountains.

Allard (1961) explored the mountain intensively and wrote about his observation of fires in the 1940s. It is possible that Allard is making observations of the very fire that Jack describes since the location and timing of the fires are very similar. Allard from a naturalist point of view was very interested in how various plants species responded to the fire. He wrote that the past destructive fires seem to have favored the laurel and other heaths, and that the fire he witnessed burned the shrubs of an old laurel thicket to the ground, but then it grew back very vigorously.
He noted that the fire had taken all the deciduous leaf litter leaving soil bare. He witnessed the rapid colonization of mosses, cladonias and lichen, amongst numerous infant kalmia seedlings. He believed that after the kalmia had turned into a thicket, fire was no longer a threat because the kalmia did not shed their leaves to create a potential fire hazard. The deciduous trees could hardly grow in the dense kalmia thicket and since no light penetrated the thicket there was no herbaceous growth either. Allard mentions the pitch pine and the large tooth aspen (\textit{Populus grandidentata}) as common invaders of severely burned ridges. He also mentions that the invasive Chinese tree (\textit{Paulownia tomentosea}) was a fire opportunist and easily recognized for its large beautiful purple spring flowers (Allard, 1961).

Gary Fleming (2002) noted in his ecological field work that evidence in the form of burn scars on trees and charcoal fragments in soil was found in many parts of the Bull Run Mountains indicating that past fires were pervasive and frequent. Currently, fires have been suppressed due to the fact that many homes would be in jeopardy if fires were left uncontrolled. The 20\textsuperscript{th} century in general has seen a period of fire suppression in the U.S., and Abram et al. (1997) document that from 1925 to 1991, the average size of individual fires has decreased by 98\%. Virginia’s Natural Heritage Program has written on the need to use controlled burns to maintain the diversity of the plant communities in the Bull Run Mountains. But fires remain very controversial and no current plan has been established to carry out a controlled burn in the mountains.

6.3 **Transition to Dormancy – Natural Factors (the Chestnut Blight)**

It is clear from the historical record and interviews that human interactions with the landscape were part and parcel of the native ecology of the Bull Run Mountains. Ethnobotany was a central part of this cycle. But what does this ecological perspective tell us about the causes
of its decline? In searching through the historical records, interview data, and ecological analysis for this area I did not find evidence of changes in environmental conditions that may help explain the transition. Except for one, the fungal blight (*Cryphonectria parasitica*) that decimated the formerly co-dominant and economically important American chestnut (*Castanea dentata*) in the Bull Run Mountains (Allard and Leonard, 1943). The chestnut blight reached Fauquier County from 1915 to 1916, and large salvage operations were put into place to harvest viable wood from dying trees during the 1920s (J.K. Gott, 1959). Allard and Leonard (1943) write that the original forest of the highlands of Bull Run Mountians was Oak-Chestnut (*Quercus montana to Castanea dentata*). They go on to say that the forest is rapidly changing following the elimination of chestnut, and they predicted that Hickory (*Carya*) would soon take its place due to the prominence of young saplings to produce an Oak-Hickory association. American chestnut was a tree rich in ethnobotanical significance. It had nutritious nuts, and its timber was highly prized for construction, furniture and also still prominent in the landscape is the form of split rail fencing. Obviously the loss of this species from the forest meant the loss of its role in the local economy and subsequent loss of related knowledge associated with its use.

Examples of environmental factors that may lead to changes in species composition and abundance and a possible cause for a decline in the knowledge and use of ethnobotanical resources in any particular area include climate change, changes in natural disturbance patterns, pollution and land disturbance. For example, in the vast boreal forest region of Canada food and beverage plants provide an essential supplement to predominately meat based diets. The knowledge of plant medicines and their applications were and continue to be a fundamental component of the holistic healing practices of indigenous people. Yet the practice of ethnobotany is now being jeopardized by climate change, roads, industrial forestry and mining. These stresses
are creating conditions favorable to invasive species that out-compete useful plants and altering their seasonal cycles (Karst, 2010). Studies have already shown phenological changes (e.g., leaf unfolding, flowering, leaf fall) in plants in response to climate change. In the boreal region, indigenous people have observed plants blooming earlier and berries being ‘burned up’ by the sun before the time when they are typically harvested (CIER 2007; Nickel et al., 2005).

Contamination from air and water pollution is also a concern. If plant foods or medicines are contaminated they could have a significant impact on the health of indigenous people (North Watch and Mining Watch, 2008).

Gary Fleming (2002) in his study of the Bull Run Mountain mentions more recent exotic pests and disease that will and have effected species composition such as the gypsy moth (*lymantria dispar*), the hemlock wooly adelgid (*Adelges tsugae*) and the dogwood anthracnose (*Discula destructive*). Not only do socio-economic and cultural factors affect ethnobotanical knowledge, but changes in species abundance and composition due to exotic pests and disease can also play a role. This is certainly illustrated in the story of the American chestnut. Decline of this species from the Bull Run Mountains was certainly accompanied by a decline in the knowledge of its many uses.

### 6.4 Transition to Dormancy - The Role of the Modern Conservation Ethic

In addition to the environmental changes another insight that seemed to play a role in the transition of ethnobotany from active to dormancy in the Bull Run Mountains was the evolution of the modern conservation ethic in the 1930s and 1940s and the conservation strategies that it birthed during this era. In particular, historical accounts reveal quite starkly how the establishment of national parks, conservancies, and other protected areas sought to cleanse the land from traces of human habitation rather than incorporate human-landscape interactions into
their conservation strategies. For better (i.e., removing human disturbance certainly benefits some species and ecosystems) or for worse (species that co-evolved with humans would decline) removing human interactions with nature at both the species and landscape scale was certainly part of the evolving environmental policy of the day. And because this led directly to the removal or phasing out of homesteaders, small farmers, and others who practiced ethnobotany—at least in and around the newly established protected zones—its contribution to dormancy cannot be overlooked.

The new conservation ethic, which matured during the critical transition period of the 1940s and 1950s, created a dichotomy between natural habitat on the one hand and human habitat on the other. As noted by O’Neal et al. (1995) this rigid distinction may be inappropriate for landscapes where humans and native ecosystems have co-evolved and, ultimately, may doom nature reserves to failure. Nonetheless, this new conservation ethic took hold and had profound effects on the Bull Run Mountains and the Blue Ridge Mountains in general in terms of the motivations for their preservation and resulting land management policies that put a premium on removal of human interactions with the land.

During the transition period, this modern conservation ethic was attributable to a number of overlapping causes – urban crowding, increasing scarcity of land, the disastrous consequences of the Dust Bowl to name a few but its inspiration was clearly attributable to none other than Aldo Leopold. Leopold lived and worked in a period of history when people were leaving farms, forests, and small rural towns and losing their direct connections to the land. He saw that maintaining consideration and respect for the natural world would be difficult unless people found ways to stay connected without this day to day interaction (TWS, 2008). He sought to accomplish this by developing the philosophical basis for a conservation ethic. Though Leopold
was not a trained philosopher, he is nevertheless credited with developing the ethical foundation of the modern conservation movement and what it has to say about the human relationship to land. His thinking culminated in his seminal essay—*A Sand County Almanac*—published in 1948, but pulled together from earlier essays dating back to the mid-1930s. The most important, and enduring idea set forth in this work is the idea of “The Land Ethic”.

Leopold’s land ethic is an ethic that makes the land itself valuable and worthy of conservation irrespective of its “instrumental, useful, utilitarian, efficient value to humans”. Leopold viewed the land ethic as an important stage in our evolution as human beings, an evolutionary step that elevated our regard for the land from “strictly economic, entailing privileges but no obligations” to one that calls on us to view the land as an extension of our own communities. Ethical consideration of the land, he maintains, adds a third dimension to existing ethical realms that address: (1) the relationship of individuals to one another, and (2) individuals to society as a whole:

> The extension of ethics to this third element in human environment is, if I read the evidence correctly, an evolutionary possibility and an ecological necessity. It is the third step in a sequence. The first two have already been taken. Individual thinkers since the days of Ezekiel and Isaiah have asserted that the despoliation of land is not only inexpedient but wrong. Society, however, has not yet affirmed their belief. I regard the present conservation movement as the embryo of such an affirmation (Leopold, 1949).

As noted by Warren (2008), *Sand County Almanac* was not just a philosophical piece, but a call to action:

> Just as each person is asked to do their part in creating a just society, in this essay Leopold asks readers to see that they must play a part in protecting and preserving a healthy, productive, and beautiful planet. He calls on the reader to help create an “ecological conscience” -- a common sense of what is right and wrong when it comes to how we relate to land.
Aldo Leopold’s land ethic represented a departure from the prevailing conservation ethic of the day. Up to that point, the American conservation ethic and the conservation strategies that embodied it were reflections of the ideas and philosophies of Gifford Pinchot. Gifford Pinchot, a younger contemporary of John Muir, formulated a unique conservation philosophy at the turn of the century that reflected a distinct utilitarian view of nature that considered the land and the resources on it and under it part of the human birthright, available for equitable and efficient exploitation for the greatest number for the greatest good. Pinchot believed that “there are just two things on this material Earth – people and natural resources (Callicott, 1994)”. Conservation itself, he believed, was a matter of efficient and scientific use of natural resources: “[t]he first great fact about conservation is that it stands for development – with the proviso that resource development be scientific and thus efficient (ibid).” Leopold’s land ethic layered a biocentric dimension on this, recognizing that not all areas should be exploited, but some reserved for the non-human members of nature’s extended family.

As such, Leopold’s land ethic made forest and wilderness preservation a central component of national environmental policy. In this respect, he walked the walk. Leopold was throughout his life at the forefront of the conservation movement, in fact, he is widely acknowledged as the father of wildlife conservation in America. In 1915, Leopold helped found fish and game associations throughout the southwestern United States. In 1922, he submitted a formal proposal for administration of the Gila National Forest as a wilderness area, a designation it received by the U.S. Forest Service in 1924. The Gila Wilderness was the first, and established the model for all subsequent wilderness designations. In 1923, he completed the Watershed Handbook. In 1935, he assisted in founding The Wilderness Society, with its goal of wilderness
preservation. In no small part, our existing network of wilderness areas, national wildlife refuges, and national parks are the fruits of his life’s work.

With respect to the causes of dormancy, the most interesting legacy of Leopold’s Land Ethic, as it was applied in practice, was the concept of nature “freed” from the influences of human uses. While Leopold himself, cognizant of the interrelationships between land and people, may not have advocated for such an approach, most of the protected areas established since the mid-1940s have had this as a central component of their conservation strategy, and, in fact, pursued it with certain zeal. Shenandoah National Park, just a bit to the west of the Bull Run Mountains, exemplifies this trend. This historical account of the park’s establishment is revealing:

In the early 20th century, the first calls for National parks in the east were heard in the United States Congress. It would be two decades before Shenandoah National Park was authorized and another ten years before it was established. During that time President and Lou Henry Hoover established their Summer White House on the Rapidan River, the construction of Skyline Drive began, the Civilian Conservation Corps was established and moved into the park area, and over 450 families of mountain residents were relocated from the Blue Ridge. With the establishment of the park in December 1935, the CCC began to build visitor facilities throughout the mountain, areas that were initially racially segregated. The core of the park’s development was completed by the beginning of WWII and, to a great extent, the mountains were released to nature (Shenandoah National Park, 2010).

The relocation of 450 families of mountain residents offers another, ecological dimension to my earlier observations made about the disparaged Hollow Folk. As I noted in Chapter 5 these families were among the very last active practitioners of ethnobotany in the region, but also regarded as culturally backward, primitive, and in need of modernization. Their removal as part of the Shenandoah National Park conservation strategy is about a direct a cause as can be found for the disappearance of plant knowledge, at least in this area. Instead of incorporating these families into the Park’s conservation strategy and recognizing the potential ecological benefits
their foraging, use of fire, and other interactions may have had on Blue Ridge ecology, Park founders viewed their relocation as an important step towards restoration of the landscape’s natural integrity. In other words, protection of the Park’s ecology meant freeing it from the effects of human disturbance. The Park’s strategy manifests a dichotomy between natural and human habitat, a dichotomy that has influenced the establishment and management of protected areas since Leopold’s land ethic was published in the mid-1940s. Once Hollow Folk families were removed, the mountains were “released” back to nature.

The trend of establishing protected areas largely freed from direct human uses is also apparent in motivations for protection of the Bull Run Mountains Conservancy. In the 1960s, the Natural Areas Council, Inc., with funding from America the Beautiful Fund and private contributions, began to buy land to protect the Bull Run Mountains from encroaching development. The Mountains were recognized as a unique natural and scenic site, a recreational resource, and the source of headwaters to Goose Creek and the Occoquan River, both vital to the Northern Virginia drinking water supply (National Park Service, 1965). In 1965, the first Virginia Outdoors Plan identified the Bull Run Mountains as the highest priority for a State Park (Virginia Outdoor Recreation Study Commission, 1965). Certainly, the mountains have outstanding biological, watershed, and recreational attributes, but at least during the early phases of Bull Run’s history locals benefited from timber, foods and medicines. Many of the areas in and around the conservancy were farmed, and as shown earlier, human-landscape interactions were quite frequent and important to the native ecology. Preserving these human uses and their associated effects on local ecology were not recognized as important conservation goals. In fact, they were regarded as an obstacle.
To be fair, the population explosion along the East Coast sounded an alarm bell for those concerned with protection of open space (Figure 7). As recounted in the historical narratives about Bull Run, “The megalopolis extending from Boston to Washington is developing into what someday will soon become a stretch of almost unbroken urban development (Wirth, 1965).” Conservationists were far more concerned about protection open spaces in northern Virginia and elsewhere along the fringes of the megalopolis then considering how to also preserve ethnobotanical knowledge.

A critical year in the conservation history for the Bull Run Mountain Project was 1965. A report by the Outdoor Recreation Resource Review Commission (ORRRC) directed each state to create a central agency to develop long-range recreation planning. Under the leadership of State Senator Fitzgerald Bemiss, the Virginia Outdoor Recreation Study Commission released *Virginia’s Common Wealth: A Study of Virginia’s Outdoor Recreation Resources and the Virginia Outdoors Plan for Conserving and Developing Them for the Lasting Public Benefit*. This report identified Bull Run Mountain as the highest priority location for a state park in Northern Virginia, the state’s fastest growing region.

This proposal outlined three key reasons for creating a natural area on Bull Run Mountain:

- The need for a conservancy in the Northern Virginia regional area.
- Preservation of a unique natural and scenic area from being swallowed by suburban sprawl.
- To provide, within the northern regional area, a unique and outstanding open space within easy reach of all people (Wirth, 1965).

So the motivation for protecting Bull Run is clear: not so much to preserve the existing character and uses of the land, but to provide open space for an increasingly urbanized population. The greatest interest here is the form of that protection, and what it says about
attitudes towards human interactions with the land. First, note the formal definition of a conservancy from a planning consultant’s report:

Definition of a conservancy is an area of land formally dedicated to being maintained as nearly possible in its natural condition. Though not necessarily completely natural and undisturbed at the time of dedication, it usually contains some degree of primeval character. A conservancy is used in a manner consistent with its continued preservation without impairment, disturbance or artificial development. It is an area used for scientific research, education, and aesthetic enjoyment providing a natural habitat for plant and animal species (ibid).

Thus, as with the majority of protected areas that were established since the 1940s, founders of the Bull Run conservancy envisioned a place of wildness free from the influences of humans and where traces of human habitation were eventually removed. This is made abundantly clear in the description of the new conservancy’s land use zones:

Zone 1: The Mountain. It is intended that Zone 1 should be preserved and restored as an absolute wild area within the conservancy. Lands within the zone should be purchased and divested of all home sites, commercial mining interests, and other man made or commercial enterprises with the exception of one microwave tower as indicated on the plan. The area should be served only by trails as indicated. These trails should follow existing or old traced of roads.

Zone 11: The Buffer Zone. Without this buffer zone experiences within the conservancy would be lost because of man’s intrusion and development of the area. The area within zone 11 of the conservancy is almost entirely being farmed. It is recommended as a part of this project, not that these farms be eliminated now, but that the land be optioned, zoned or otherwise earmarked for eventual inclusion and restoration to a natural environment when such farm or operations cease to be economical, or the owners desire to cease operation (ibid).

And so just like Shenandoah National Park to the west, the formal conservation strategy for Bull Run sought and planned for eventual elimination of active human uses. Because the small farms and homesteads that still existed in and around the conservancy were the last repositories of ethnobotanical knowledge it is fair to say that the process of land conservation in the region, and specifically in Bull Run, was at least one important factor leading to dormancy in this region.
6.5 Consequences of Dormant Ethnobotany on the Ecology of the Bull Run Mountains

The transition to dormancy reflected a gradual removal of human interactions with plants. The loss of these interactions had significant consequences on biological diversity such as the loss of native grasses and quail in the Bull Run Mountains. Biodiversity is defined as “the variety of organisms considered at all levels, from genetic variants belonging to the same species through arrays of species to arrays of genera, families, and still higher taxonomic levels” (Wilson, 1992). Biodiversity also includes the variety of ecosystems, which comprise both the communities of organisms within particular habitats and the physical conditions under which they live” (Wilson, 1992). The determination of the total number of different species in an area is called “species diversity.” Ecologists refer to this measurement as “species richness” or alpha diversity (Whittaker, 1972). The diversity that is discussed within-species level is referred to as “genetic diversity (Raven et al., 1994)”.

A community refers to all the organisms that live in a particular habitat and affect one another as part of the food web or through their various influences on the physical environment (Wilson, 1992). “Ecosystem diversity” refers to the variety of ecosystems found on earth, such as forests, coral reefs, and deserts, to name a few (Raven et al., 1994). People/plant interactions affect biodiversity at various levels. Here I provide evidence from interviews, historical records, and an ecological study by Fleming (2002) of dormancy’s implications for biodiversity in the Bull Run Mountains.

The transition to dormancy in the Bull Run Mountains was accompanied by changes in species, community, and ecosystem diversity. Historical records, my interviews, and ecological studies bear witness to these changes. Those who farmed around the Bull Run Mountains just like Jack in his mountain homestead shared a keen eye for what is happening in the environment, and the consequences of changes. Mr. Partlow recalls how the quail disappeared. The crude farming methods of the day resulted in small fields, periodically fallow land, and weedy-brushy
fencerows. This repetitive, crude disturbance permitted an abundance of the natural plants so favored by quail to exist as part of the system. Burning of the woods was also a common and frequent practice that maintained quail habitat. As these practices faded so did the quail.

It’s not bad for cattle, but that what this got rid of most of the quail in this county, Orchard Grass they could get through but the fescue is too thick. The birds have trouble getting through it. Quail basically died out when I was a kid. I used to do a lot of quail hunting. We’d have quails for breakfast on Christmas morning (Mr. Partlow).

Mr. Partlow was certainly right in his observation, as there is research that attributes the decline of quail to loss of habitat associated with the invasion of fescue, a plant that replaced the orchard grass maintained by local homesteaders through their land management practices. The invasion of fescue had effects on community diversity as well. Wildlife biologists have long agreed that fescue is a poor wildlife habitat. Tall fescue is an extremely competitive plant which tends to dominate fields where it has invaded or been established.

Tall fescue is a sod-forming turf grass with a thick matte growth form, which is extremely limiting to the movement of wildlife such as quail or rabbits. The thick growth form of tall fescue often eliminates other plants from growing with it. This creates nearly monocultural fields of fescue without the necessary diversity in plant species needed to provide for the life requirements for a variety of wildlife species (Sole and Keyser, 1998).

The loss of human interactions in the post-dormancy era also led to changes in ecosystem level diversity. For example, the mountain’s populations of pitch pine and table-mountain pine share a dependence on periodic fires to maintain their presence in the landscape. In the absence of stand-opening fire or other disturbance, little or no regeneration of these shade-intolerant species is possible. According to the Bull Run Management plan:

Presumably because of dramatic reduction or exclusion of fires in the 20th century, many Pitch Pine Woodlands appear to be undergoing canopy closure and slow but certain encroachment by chestnut oak and other oaks. A good indicator of fire suppression in the Bull Run Mountains is the recent establishment of red
maple and/or American beech saplings in the understory of Pitch Pine Woodland communities (DNH, 2004).

Taken together, Allard and Fleming’s studies of the mountains also document changes in ecosystem level diversity associated with the abandonment of homesteads and farms. Hollows and lower elevations of the Bull Run Mountains were homestead sites in the 18th and 19th centuries, and were extensively cleared and farmed. Most of these sites were abandoned by 1940 and have since undergone succession from nearly pure forests of Virginia pine (Pinus virginiana) or tulip poplar (Liriodendron tulipifera) to young mixed hardwoods (DNH, 2004).

6.6 Implications for the Concept, Causes, and Consequences of Dormant Ethnobotany

This chapter applies the mixed method approach by pulling together analysis of the conservation history of the Bull Run Mountains with observations from scientific studies, reinforced by examples from interviews, to further develop the concept of dormant ethnobotany and understand its causes and consequences from the ecological perspective. The importance of considering the concept of dormancy from the ecological perspective is consistent with standard ethnobotanical research. However, making the links between homesteaders’ use of plants in the pre-dormancy era, the ecological factors that may have contributed to its demise, and the subsequent changes in Bull Run’s ecology is a complex task because of the relatively sparse and discontinuous oral, historical, and scientific record. Nonetheless, some important insights emerge from my analysis.

First, in the pre-dormancy era, my interviews with Mr. Partlow, Mr. Dawson, and Mrs. Douglas and Mrs. McClaughty reveal that foraging was important to the inhabitants of the Bull Run Mountains and, by implication, a factor that influenced the local ecology. These interviews document how foraging for wild mustard, poke, watercress, dandelion, chickweed, and lambs quarter, native wild blackberries, black raspberries, bush berries, deer berries, huckleberries and
wine berries was frequent and ubiquitous on the landscape. From an ecological perspective, this is significant because the act of foraging is well known to be a form of human-plant interaction with known impacts on the abundance, diversity, and genetic makeup of the plants gathered. Thus, from the ecological perspective, foraging in the Bull Run Mountains was an important disturbance factor maintaining the composition and abundance of plant communities. The transition to dormancy can then be understood as a removal of an important ecological process.

Secondly, my interviews provide insight on cognition, or how plants were perceived. In this regard, Jack’s and his sister’s comments questioning why anyone would pay at the store for what grows wild, and their extensive knowledge of what was gathered in what seasons, shows that ethnobotanical knowledge was perceived not as a luxury or recreational pastime or scientific endeavor but simply part of life embedded in the seasonal cycles. Through an ecological lens, dormancy suggests a severing of this intimate tie to the seasons and local ecosystems, a removal not only of an important ecological process but a removal of certain kinds of human activities from the chain of ecological dependencies.

Besides fire, my research demonstrates how intentional fires were another regular ecological disturbance factor related to the use of plants in the Bull Run Mountains. From Jack Dawson’s interview, we learn that fire was used in the Bull Run Mountains to increase the native blueberries and was most likely also used as an effective method to clear forests and fields as well. Combined, these two human-plant interactions—foraging and fire—help develop the concept of dormant ethnobotany by characterizing it in terms of the loss of important ecological processes.

Looking at ethnobotany through the ecological perspective also led me to insights about the causes for its decline. In many regions of the world active ethnobotany is being jeopardized
by climate-induced changes in ecological communities, pollution, and land disturbance. In the Bull Run Mountains it was the blight that had dramatic consequences on the American chestnut. What also emerged from my research is evidence that a contributing factor in the decline of ethnobotany in the Bull Run Mountains was the conservation movement that set the stage for planning of the natural area without the consideration of human interactions.

During the critical transition period of the 1940s and 1950s, the modern conservation movement was born. Inspired in part by Aldo Leopold’s land ethic, this movement set in motion the establishment of most of the national parks, wilderness areas, wildlife refuges, and conservancies we enjoy today. As graphically illustrated by the historical records related to establishment of Shenandoah National Park and the Bull Run Mountains Conservancy, this burgeoning network of protected parks, wildlife refuges, and wilderness in the U.S. and in Virginia had a not so subtle bias against incorporating active human uses of the small farmers and homesteaders within and around their boundaries. The relocation of small farmers and homesteaders in the path of these protected areas can certainly be viewed as one of the factors contributing to the loss of ethnobotanical knowledge and use of plants since these people were its practitioners.

Lastly, my investigations link the decline of ethnobotanical knowledge to consequences for species, community, and ecosystem diversity in the Bull Run Mountains. Populations of indicator species like the bobwhite quail have been in freefall since the transition to dormancy because they relied, in part, on regular human interactions with the landscape that helped maintain their habitat. Intentional fires and the working of small family plots helped maintain the native grasses in which they thrived. Once these interactions were removed, these areas became dominated by fescue and other grasses that supported far fewer numbers and diversity of
wildlife. The removal of frequent, intentional fires also had significant impacts, but at the level of ecosystem diversity. Native stands of pitch pine, and to a lesser extent, regeneration of certain oaks have suffered since the transition period due to the absence of fire. Abandonment of homesteads and small farms also led to changes in ecosystem level diversity. As these lands were vacated, over time, the native Virginia pines and tulip poplars that dominated the landscape were gradually replaced with the mixed hardwood forest we see today.

All these changes are well documented through my comparison of the observations and ecological data from Allard’s field notes with Gary Fleming’s recent work in 2002. Fleming (2002) identified five interrelated factors that influenced changes in Bull Run’s ecology since Allard made his collections, including forest succession and maturation, fire suppression, insect and fungal pathogens, herbivory—due to an increase in the deer population—and exotic plants. Most directly forest maturation and fire suppression, and indirectly the decline of hunting resulting in a dramatic increase in the deer population, which caused increased herbivory, are factors that can be related to the removal of human-plant interactions, and thus are integral to the concept of dormant ethnobotany in the Bull Run Mountains.
Chapter 7. Concluding Thoughts and Insights

In this dissertation, I introduced the concept of dormant ethnobotany as the study of relationships between people and plants that are inactive, but nonetheless still alive in memories, the historic record, and folklore. Insights gained from the study of dormant ethnobotany can be important for preserving LEK and thereby advancing sustainable development. I believe that dormant ethnobotany is a branch of ethnobotanical inquiry that is distinct from the vast majority of research focused exclusively in dynamic settings. Dormant ethnobotanical studies address significant gaps in the field by expanding the scope of research to include developed and industrialized settings, by incorporating qualitative information derived from interviews, and by enriching the research with ecological field studies. My research has shown that defining a spatial and temporal focus based on a small geographical area and within the critical period of transition from active to dormant states is essential for a meaningful interpretation of data provided by landscape history, interviews, ecological field studies, and folklore (Hoberman, 2000; Hofstra et al., 2001).

I have developed a methodological framework for the study of dormant ethnobotany, a framework that relies on a mixed methodology approach and triangulation to determine the critical transition period from dynamism to dormancy. Using three distinct perspectives—socio-economic, cultural, and ecological—I relied on historical accounts to document the transition, interviews to corroborate and personalize these accounts, and folklore to highlight the significance of the interactions between people, place, and plants. I also used ecological studies to make the connection between ethnobotany—both its active and dormant states—and changes in the diversity, abundance, and distribution of species and plant communities that are part of the natural landscape in the Bull Run Mountains. Viewing dormant ethnobotany through these three
separate lenses is an important way to organize the various strands of the concept since it spans a wide range of disciplines.

Each perspective sheds light on the concept, causes, and consequences in a unique way as discussed at the end of each chapter. The synthesis of these three perspectives reveals eight key insights:

1. **Studies of dormant ethnobotany are not snapshots in time, rather, they require an analysis of the transition period from active to dormant states.**

   Studying dormancy is not a snapshot in time, and cannot rely solely on the use of quantitative field studies where the data are a reflection of the present. Therefore, the study of dormancy is essentially the study of a transition that begins with establishing the role and benefits of local ethnobotanical knowledge in the pre dormancy era. From there, the causes of its decline can be discerned from historical, social, economic, and environmental conditions and trends. After dormancy has been established, research helps identify the consequence of this decline for people, communities, and the landscape. In each chapter I implemented this basic thought process. This general sequencing was also the foundation for my qualitative interview process, and certainly qualitative inquiry has an advantage over quantitative research in looking at a phenomenon from a complex historical perspective (Greene et al., 1989).

   Throughout this dissertation, I have made reference to people, places, and events that help organize my inquiry into three time periods, which I will call Pre-dormancy, The Transition, and Dormancy. This information is summarized in Figure 17. The timeline pulls together key historical markers from all three perspectives explored in this dissertation. Certainly this transition from Dynamic to Dormant took place over an extended period of time starting around the 1930s up until the Post-War Era. The Pre-Dormancy era is marked by those historical documents and maps that signify the settlement of the Bull Run Mountains, as a time frame
where those homesteaded in the mountains were totally dependent on woodlands and cultivated plants for survival. Simon Kenton, born in 1755, and the stories that describe his childhood in the mountain provide a vivid description of this time frame. We know from these stories how important plants were, not only to survival but through the midwives tales that provided ritual and medicinal value. Small mills begin to close throughout the Bull Run Mountains around the same time the great migration from farm life to city life of the 1920s took place, with over 50% of Americans living in an urban environment (Leuchtenburg, 1995). The transition timeframe generally began with the Great Depression that was tipped by the stock market crash of 1929. The 1930s brought about the New Deal, and after that came the WPA, REA, and farm policy, which implemented price control through allotments of agricultural commodities. This is evident because in 1932 flour production stopped at the Aldie Mill.
2. Ethnobotany is a fragile form of local ecological knowledge that can disappear rapidly.

Ethnobotanical knowledge is a form of information embodied in human culture, and “relearned” by each generation only if it is actively used and communicated orally or by demonstration in the field, this distinction was succinctly described by Holmes (1994):

Humans superimpose cultures on the wild nature out of which they once emerged, with radical innovations. Information in wild nature travels intergenerationally on genes; information in wild nature travels neurally as people are educated into transmissible cultures...In culture, the skills are coded in people’s traditions, in their crafts, religious rituals, or technological manuals.

Because of its cultural roots, and as highlighted in my socio-economic analysis, ethnobotanical skills passed along from one generation to the next appear to be extremely fragile.

From the qualitative interviews, it became apparent that the transmission process could be

<table>
<thead>
<tr>
<th>Date</th>
<th>Observation/Event</th>
<th>Ethnobotanical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-dormancy Era</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1722</td>
<td>Treaty of Albany</td>
<td>Igneous formation restricted to west of the Blue Ridge</td>
</tr>
<tr>
<td>1728</td>
<td>First Land Grant of the Bull Run Mountains</td>
<td>Limited Native American presence in the Bull Run Mountains</td>
</tr>
<tr>
<td>1742</td>
<td>Beverly Mill opens</td>
<td>Agriculture as commerce begins</td>
</tr>
<tr>
<td>1787</td>
<td>Map published in &quot;Jefferson's Notes on Virginia&quot;</td>
<td>Appears the name of the Bull Run Mountains</td>
</tr>
<tr>
<td>1785</td>
<td>Simon Kenton born</td>
<td>Stories of Simon Kenton capture dynamic ethnobotany in the Mountains</td>
</tr>
<tr>
<td>1852</td>
<td>Steel mills run through Thoroughfare Gap</td>
<td>Train offered passenger service as well as transportation of agricultural products</td>
</tr>
<tr>
<td>1875</td>
<td>Mad Stone story appears in the Alexandria Gazette</td>
<td>Documents stature of folk medicine at the time</td>
</tr>
<tr>
<td>1876</td>
<td>80 small mills in Fauquier County</td>
<td>Small mills were used to mill limestone, sawmills, timber, wheat, and corn, Shows large areas undercultivation for corn and wheat</td>
</tr>
<tr>
<td>1904</td>
<td>Civil War Manpower Grounds/Map of the Bull Run Mtr</td>
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</tbody>
</table>

**Figure 17. Timeline of Key Events. Transition from Active to Dormant Ethnobotany in the Bull Run Mountains.**
broken in a single generation, as mentioned in the skills and knowledge of canning. Fragility of knowledge is also subject to social bias and current trends as noted in the justification for the removal of “hollow folk” from Shenandoah National Park. If knowledge associated with the use of plants has negative connotations then it is essentially more vulnerable. Fragility was also discussed in how plants can be perceived as no longer there when they are no longer being used, as mentioned in the interview with Mary Stewart. Thus these findings provide insight into what is important to be aware of in the social context if the goal is to sustain LEK.

Thus, within very few generations, cultural practices can be lost when knowledge of wild nature, which travels neurally through stories and cultural activities, is replaced by new practices that may be triggered by a change in cultural norms. In contrast, information present in the wild, traveling intergenerationally through genes, does not have a fragile cultural venue.

3. Changes in cultural norms were the dominant driver of dormancy.

Given its fragile nature as a cultural practice rather than something encoded in genes, changes in cultural norms can cause a break in the chain of ethnobotanical knowledge and be a primary driver of dormancy. Indeed, what I have found is that in “dormant” situations it is apparent that the overarching cause is the change in cultural norms that stems from an interrelated set of historic, economic, social and ecological factors. Although this dissertation explored dormancy from three distinct perspectives (socio-economic, cultural, and ecological), I believe this change in cultural norms is the most dominant factor. Changes in cultural norms, for example, were behind many of the causal factors I discussed including the adoption of modern household appliances, the rise of consumerism, the division of labor between men and women, the stigmatization of those with active ethnobotanical knowledge, and the modern conservation movement.
4. **Dormancy studies help fill gaps in the ethnobotanical research.**

The study of dormant ethnobotany fills a unique niche in the field of ethnobotany. As previously mentioned published ethnobotanical studies are most often associated with the dynamic use of plants by people in a cultural setting where plants are actively used in day-to-day life activities. By contrast, ethnobotanical relationships that exist in western cultures have received relatively little attention. There is new awareness that in the process of trying to focus on the exotic remote cultures and their unique biodiversity, developed nations have overlooked the biological relevance of their own backyard. Minnis and Elisens (2004) share their view on why this may be the case in the introduction to Biodiversity and Native America:

> Save the rainforest’, is a common mantra for philanthropic and commercial interests in the first world. Ironically, some of the loudest calls for preserving biological and cultural diversity come from the temperate areas, which are too often believed irrelevant because of their presumed low biological diversity and acculturated indigenous people (Minnis and Elisens, 2004).

Certainly the study of dormant ethnobotany in the Bull Run Mountains of Virginia seeks to reverse the trend and encourage research that acknowledges the cultural and biological relevance of developed nations.
5. **Stories, perception, and necessity are all key in sustaining LEK.**

From the cultural perspective it became apparent that folklore was a vessel for passing down vital knowledge about plant use, so essentially the role of stories is the first critical insight to sustaining LEK. A second critical insight is related to social biases. An association of knowledge, perceived as negative or linked to poverty, can have detrimental effects on the maintenance of LEK. When people, who are the keepers of knowledge, are respected this knowledge is power in the community setting. This was well illustrated in the folkloric story of the midwife who used her knowledge in choosing the growing tree for Simon Kenton; from this story the midwife is perceived in a place of power for her knowledge of herbs and roots and when to harvest and how to use them. The third insight is necessity, that when knowledge of plant use is needed with in a community it is therefore sought out. This certainly sets up the final discussion of the relevance of the study of dormant ethnobotany and the sustainability movement as this knowledge is re-emerging because of a necessity to secure local food sources, herbal medicine, self- sufficiency, sustainability and appropriate technology in the face of global environmental and economic changes.

6. **The study of dormant ethnobotany is important for preserving LEK and advancing sustainable development.**

Ever since the 1992 “Earth Summit” in Rio de Janeiro, preserving LEK has been an important pillar of sustainable development in less developed nations. For example, Chapter 26 of Agenda 21 (which emerged from the Earth Summit) formally recognized the role of Indigenous people in global sustainable development. Agenda 21 requires that Aboriginal values, traditional knowledge, and resource management practices are recognized and meaningfully involved in sustainable development undertakings; and that capacity-building in Aboriginal communities, based on the adaptation and exchange of traditional knowledge, is developed to
increase the ability of Aboriginal peoples to participate in sustainable development. Subsequent declarations have established indigenous rights to traditional plants and medicines. Article 24 of the 2007 Declaration on the Rights of Indigenous Peoples states that “[i]ndigenous peoples have the right to their traditional medicines and to maintain their health practices, including the conservation of their vital medicinal plants, animals and minerals.” It is widely understood that the benefits of protecting LEK now extend well beyond indigenous communities to wherever it exists. Indigenous or traditional knowledge systems bridge the gap between biological and cultural diversities. “These complex and dynamic arrays of knowledge, know-how, practices and representations guide human societies in their innumerable interactions with the natural milieu (Nakashima and Roué, 2002).” Article 8(j) of the Convention on Biological Diversity gives particular recognition to this cultural dimension of biodiversity, as do all of the cultural conventions published by the United Nations Educational, Scientific and Cultural Organization since the Earth Summit.

Preserving traditional or local ecological knowledge is an essential strategy for sustainable land use because it enhances human’s ability to adapt to changing conditions. As noted by DeWeerdt and Striplen (2002) “[t]raditional ecological knowledge may be the epitome of what is now called adaptive management – an evolutionary process in which centuries of accumulated observations were continuously updated and integrated, and interaction with the landscape adjusted accordingly.”

The relevance of the study of dormant ethnobotany to preservation of LEK is twofold. First, dormant ethnobotanical studies can help identify the “red flags” that signaled the transition to dormancy was underway. In my research, three of these red flags were clearly present in the pre-dormancy era. The first was the changes in the landscape that occurred as homesteaders
vacated their lands and human disturbances in the form of fires and foraging declined. As I discussed in the ecological chapter, as people left the land and no longer applied local ethnobotanical knowledge the forest took back the landscape.

Interestingly, a study done in South Africa’s Wild Coast provides an opportunity to discuss how one can identify this “red flag” to dormancy. In this study, Chalmers and Fabricuis (2007) compared interviews with local inhabitants and scientific research on land use change, to gain further insight into why forest cover between 1974 and 2001 had increased by 49%. Though the study outlined differences in LEK versus scientific research, it also commented on how the two complemented each other, leading to a more complete picture of what forces contributed to the increase in forest cover. LEK offers advantages because it takes a fine-grained, context specific perspective (Berkes and Folke, 2002) and adds value to coarse-scale conservation plans (Reyes and Ginsburg, 2005). Few LEK studies focus on the processes that drive change; often studies focus on a particular species, its distribution and technique of harvest and for example its medicinal qualities or other uses. But understanding what drives change on an ecosystem level is important in regards to the larger picture ecosystem management.

Chalmers and Fabricuis (2007) found that human-induced fire to maintain grassland along with cultivation and clearing, and human movement and harvesting patterns are a key determinant of landscape-cover. Interviews of LEK practitioners revealed six causal factors for the increase in forest cover that could not have been captured by scientific methods: (1) the introduction of exotic trees that people do not harvest; (2) the emigration of people leaving the area and the relocation of homesteads; (3) reduced frequency of fire; (4) reduced reliance on building materials because of social programs that helped to purchase material from hardware supplies; (5) less cultivation and thus abandoned fields; and (6) change in cultivation practice
from large fields to small home gardens. These local experts also commented on the fact that the forest has also increased in density because of reduced use of humans and livestock in the forested area. Thus, changes in land-cover could be a red flag of the concurrent loss in ethnobotanical knowledge. This study points out that LEK and science can complement each other by the different types of insights they reveal. This particular study of LEK provided a historical perspective on outside influences and how the local inhabitants responded with changes in their interactions with the landscape. The scientific component of studying aerial photography allowed quantification of the changes that took place over the study time period.

The second red flag I noted was the loss of ethnobotanical knowledge amongst the younger generation. Recall Elizabeth McCaughey’s statement, “of course my kids don’t know how to do that,” when she spoke about canning. This phenomenon, the loss of ethnobotanical skills in the younger generation, is in fact a significant indicator of a future decline of ethnobotanical knowledge in general. Pilgrim et al. (2007) found that ecological knowledge is lost in wealthier communities and countries as people are no longer as dependent on local resources. What was discovered was that knowledge acquisition and subsequent saturation occurs at an early age in most resource-dependent communities, and the rate of knowledge loss was revealed to be most rapid in industrialized regions. Interestingly the researchers point out that understanding loss of ecological knowledge is important to understanding the declining capacity of communities undergoing economic development to manage their natural resources and the future of ecosystem diversity.

Another red flag is the loss of folklore. If, as I documented in Chapter 6, we accept that folklore was the primary vessel by which ethnobotanical knowledge was transmitted generation to generation, it makes sense that the sudden disappearance of stories and storytelling can be
used as a signal that ethnobotanical knowledge encapsulated in those stories is also on the decline. LEK is perceived to develop through frequent interactions, and knowledge is transferred between generations through observation and narrative, when they are valued as key tools to survival. In chapter 6, I placed the loss of story not long after the WPA folkloric study took place (1930s) since no one I had interviewed ever mentioned these stories afterward. It appears when stories or folkloric tales are no longer told, these vessels that carry plant knowledge within them, are broken.

The study of dormant ethnobotany also contributes to the preservation of LEK by indicating the conditions that need to be present for its reemergence and documenting the fact that it does not take long for local communities to acquire and use ethnobotanical knowledge when conditions call for them to do so. One interesting finding of my research is the relatively short period of time required by those who inhabited the Bull Run Mountains to develop a unique ethnobotanical relationship. As outlined in Figure 18, the relationship to plants developed, along with skills, tools, and knowledge relating to folklore, agriculture, forging, and ecological interactions, all in 200 years or so. Furthermore, there were social benefits to this knowledge, such as sense of pride, self-sufficiency and observation. The community benefits were: protection from economic recession and sense of community connection. This is remarkable considering that although we may have preconceived notions that these relationships may take thousands of years to cultivate this study shows that in about two hundred years, when the settlers began to take root in the Bull Run Mountains, considerable ethnobotanical knowledge and LEK had developed, continued to build, and was transmitted to subsequent generations.

The hopeful message here is related to the level of human adaptability. Though it may take just one generation to lose knowledge or for it to go dormant, it can be regained with
remarkable speed. This study demonstrated that a non-indigenous group of people, of a very small geographical area, had in a short period of time (200+ years) produced a connection that had endemic folklore, essential unique stories specific to the Bull Run Mountains, its people, landscape, trees, agricultural knowledge, foraging skills, and ecological interactions that enhanced wild plant production (e.g., blueberries). This connection provided social and community benefits that resulted in self-sustaining outcomes in times of outside economic distress.

![Diagram](image)

*Figure 18. LEK and its Social and Community Benefits in the Bull Run Mountains.*

This is most apparent in the folkloric stories of how the mountain got its name, because it defines how the landscape along with those that settled there launched their connection to the Bull Run Mountains. The folkloric stories of Simon Kenton reinforce the role of regional
identity and the importance of local ecological knowledge in the pre-dormancy era. This is relevant to the sustainability movement because it makes the argument that in a short period of time LEK can be renewed fueling sustainability and interest in restoring local agriculture. If this trend continues will this knowledge once again regain its social power, and will plant knowledge be important to economic and social survival? Could the increase in seed sales that took place during the global banking crisis be an indication of how individuals and communities will respond to global economic meltdown?

That the study of ethnobotanical dormancy can help answer these and other related questions is an indication of its usefulness in the context of sustainable development. Extending the field of ethnobotany to include dormancy will be of benefit to the broad agenda of sustainable development since there is urgent need for deeper analysis of ethnobotany, its decline, and its potential reemergence. As Zent (1999) suggests:

“because of the precarious existence of this ecological wisdom of the ages that is eroding faster than the biological species themselves, there has been an outpouring of eminent scholarly opinion declaring the study and preservation of such knowledge to be a most urgent task of great scientific, economic, and humanitarian value.”

7. **This study provides a model for interdisciplinary research that is replicable in other settings.**

Another significance of this dissertation is that it provides a model for interdisciplinary research of the phenomenon of dormant ethnobotany. That model consists of identifying the transition timeframe from active to dormant ethnobotanical knowledge through triangulation, employing mixed methodology to integrate a variety of perspectives that help develop the concept, causes and consequences. The study of dormancy is feasible for a single researcher applying multiple methods, but also has great potential for an interdisciplinary team of
researchers applying epistemological pluralism as a more holistic approach to address dormancy as a function of complex, interrelated historical, economic, social, cultural and ecological factors.

In fact, Miller et al. (2008) makes the case that epistemological pluralism recognizes that there are several ways of knowing and that applying plurality especially in the study of management of social ecological systems (SES) is particularly useful. This is because epistemological pluralism seeks to strengthen multidisciplinary, interdisciplinary, and transdisciplinary research by contributing four critical elements. The first element is acknowledgement of the validity in, and value of, multiple ways of knowing. Secondly, it asserts that integrating these epistemologies results in a more complete understanding of complex issues, such as SES (Lui et al., 2007). Third, it accepts that operationalizing these different approaches requires continual negotiations, and finally it requires that disciplinary researchers work together to find ways to accommodate each other’s approach rather than compromise them (Miller et al., 2008). This is brought to the forefront because normal science has become less capable of addressing complex social ecological interactions (Gallopin et al., 2001). The model for the study of dormancy is established so that it acknowledges multiple ways of knowing, achieved through the conceptual understanding of how plant knowledge is woven into the socio-economic, cultural and ecological fabric of a particular society. For example, Naiman (1999) points out in human dominated regions that a mixture of cultural practices, traditions, myths, and institutions creates land mosaics. The use of epistemological pluralism is, then, necessary to fully understand landscape ecology including the full spectrum of plant-people interactions.

I conclude by wondering whether or not the causes of dormancy found here, such as social stigma, farm policy, and new technologies, are having the same effect in regions of the
world where active ethnobotany is still an integral component of community life. Could the concept of dormancy be reinforced by similar studies of other regions? What differences might be found that could challenge the findings of this particular case study? Establishing a model to apply mixed methodology in the study of the phenomenon of dormancy essentially allows for further insight into the link between dormant and active ethnobotany. It is my hope that this dissertation will stimulate a number of new dormant ethnobotanical studies that will deepen, corroborate, or help reshape the concept of dormant ethnobotany, understand its causes, and document its consequences across a range of geographic settings. Understanding the cause of the loss of ethnobotanical knowledge is a critical key in the movement towards more sustainable connection to our local environment.
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Appendix I. Interview Guide of Questions

Describe your family tree, those that have lived in Bull Run Mountains.

What changes have you noticed in the community? Do you have a favorite place in the mountain or a favorite walk? If so describe the place?

Have you noticed a change in plant knowledge in your life time/ If so what has contributed to this change?

Do you feel that plant knowledge is important to the conservation efforts to protect the Bull Run Mountains?

Do you have a memory of learning about plants from friends and family that you would like to share?

Are there historical events that you think changes how plants were used in the mountain?

Are there social changes that you think contributed to how plants are used in the mountains?

Are there ecological changes that you may recall that contributed to how plants are used in the mountains?

The questions are designed to ask a main question and then there are follow up questions.

What were the main types of foods that were prepared?

Which foods were canned?
  
  Do you have any canning recipes?
  
  Do you have any Vinegars, or Pickling Recipes?
  
  Which things were dried?

What was stored from the garden for the winter?
  
  How were things stored for the winter?
  
  Did you have a favorite dish?

What food items were brought from the store?

What food items were traded at the store?

What types of wild plants did you collect?
  
  Which types of berries do you remember collecting?
  
  What were some spring greens that were harvested?
  
  What about harvesting mushrooms?
  
  Did you ever harvest different types of nuts, if so for what purpose?

Where did you harvest these berries, mushrooms, and nuts?
  
  How would you store and cook them?

What type of farming did your family and neighbors engage in?
  
  Did you family save seeds, if so what types?

Have you noticed changes from woods to meadow or meadow to woods, if so describe the location?
Did your family rely on a spring for water?
   Where is the spring?
Did your family cut timber, if so for what?
Do you have a favorite tree?
Did your family work with the quarries?
Did any of your family work at the Mill?
If so what did they do and which mill did they work at?
Do you remember any fires? How did they start? Where were they? When was the fire?
Do you remember any crafts that involved using plants?
Did any one collect milkweed, if so for what?
Did you collect vines for baskets, if so what type of vines?
Did you use and plants to make soaps, if so what types?
Did you use or collect any plants for Medicine?
   Was there a local mid wife?
   Was there a local doctor?
   Was there a local person, who knew about plants, What about snakebites?
   What plants have you used to make a tea? What time of year would you make the tea?
   What did it help cure?
Did you make any local wines?
   What kinds of plants were used in winemaking or moonshine?
   Do you have any old recipes, could you share them?
Do you have a favorite flower that you like to grow or pick for cut flower?
Is there a question that I forgot to ask, is there anything else that has come to mind that you would like to share?
Description of interview analysis

Once all interview data were collected, from both active interviews and the interview that had been located at the Aldie Mill, I then cut and pasted all relevant quotes that related to plant use into one document. I then noted how each quote was relevant to plant use in the mountains. Examples of noted uses are as follows: food, foraging, medicine, fires, historical uses, and positive memories, to name a few. I did multiple rounds of sorting the interview results to then group the quotes into themes. This process was helpful to then build a sense of the relationships between the various noted plant related quotes. The following themes were:

The Mill: What people brought to the mill, what changed at the mill as far as processing over time, how the mill was the center of town and people’s lives.

Plant use and History: Role of plants during the depression, growing things in time of need, war rationing, collecting things during World War II.

How experiences with plants related to peoples lives: Sense of place, memories of teachers, working together.

Reasons for decline in plant use: Farm policy, electricity, and memories of change from one generation to the next.

Foraging: foraging for herbs, foraging for wild greens, basket making.

Growing food: sense of pride, sense of independence, hard work.

Interactions and change in the landscape: Fires, loss of quail populations, increase in deer and other animal species, loss of bees/ hunting for honey.

From this list of themes that related to plant use the initial idea was that the dissertation would take on the form of a series of essays that would describe ethnobotany in the Bull Run Mountains. These themes were then used to explore and understand how the content of the quotes related to the community experience in regards to the change in daily practices of using local plants. The list of eight themes/essays were refined as follows: Folklore, Fires and foraging, Gardening and self-sufficiency, Farmers and their fields, The mill and village life, Medicinal Plants, Historical times, and Experiences that connected people with plants. I was then going to do a separate essay on Allard’s and Fleming’s ecological studies entitled ‘From field to forest and From farms to conservation’.
I then went back to the interview quotes and color-coded those quotes that related to the essay topics. I then outlined and began to write the preliminary essays. As I drafted the initial essays I began to run into the problem of overlap of the various essays. This is how I then began to develop the concept of the three main perspectives to dormancy. I realized that the essays on the mill, farmers and their fields, and gardening were all related to the socio-economic perspective. I then began to notice that the essays on the topics of medicines, and forest folklore, and experiences that connected people to plants were linked under the cultural perspective. I then combined foraging and fires with the comparative field studies for the final ecological perspective.

Susan Leopold, Application for Approval of Research
Attachments, Project Description, Informed Consent Form, Interview Guide

Project Description:
This dissertation proposal establishes an outline for the study of dormant ethnobotany in the Bull Run Mountains, located in Virginia, by using a combination of mixed methodologies. The conceptual development of the term dormant ethnobotany arose from a desire to understand the causes and address the phenomenon of decline in regional or local plant knowledge. This research contributes to the understanding of how plant knowledge is deeply connected to the historical, ecological, and social dimensions of regional identity. The overarching questions guiding this research are what are the historical, ecological, and social reasons that contribute to the decline in ethnobotanical knowledge of a specific region and how are these three elements intertwined. This approach to the study of ethnobotany is unique because the concept of dormant ethnobotany has not been extensively explored.

A component of the mixed methodology is to interview eight individuals or subjects who are over age 50, and who live or have lived in the Bull Run Mountains at one point in their lives. Through initial conversations conducted in 2006, eight individuals have been identified to be subjects for the interviews. They represent families that have lived in the Bull Run Mountains for several generations. They were also chosen because they represent diverse aspects of mountain life, from a store and mill owner, to a woodsman, dairy farmer, and family members of an historic African American community.

A questionnaire guide will be used to conduct interviews in a casual setting; the interviews will be recorded and then transcribed. The interpretive approach will then be used to write about themes that emerge that relate to how plants were used historically in the Bull Run Mountains.

A possible risk that may apply is if a question about history or plant use was to stir-up any negative memories or feeling that the person being interviewed may have. I feel that the benefits of recording local history out way the risks of possibly stirring-up negative emotions. I would not continue the questioning if I sensed any negative emotions upon answering the question, and before the interview is to take place kindly state when using the Informed Consent Form that no question needs to be answered if the subject does not wish to engage in a specific question.

I am only acquiring the person’s name and family history as it relates to the Bull Run Mountains, I will inform them that the conversation is being recorded and at anytime I can turn recording
equipment off. Also, I will offer to give them a full transcript of the conversation after it has been transcribed. The individuals that I have asked to participate in the interviews are willing to share their identity and family history, if at any time they should change their mind I will remove them from the study.
Informed Consent Form

Dormant Ethnobotany: A case study in regional plant knowledge in the Bull Run Mountains.

Project Description

This Dissertation project involves a historical research study of how plants are and were used in the Bull Run Mountains. The project’s purpose is to document how plants have been used for a variety of reasons, for example economical, medical, and food. The project’s purpose is to also identify historical, ecological, and social reasons for why plant use has changed over the last fifty years.

Interviewee Participation

During the interview, you will be asked to share your memories of plant use in the Bull Run Mountains and your perceptions of how things have changed relating to the use of plant knowledge in the mountains. The only foreseeable risks are perhaps unpleasant memories in which you should not feel any pressure to answer any question that you wish not to respond. The benefits to participating in the research are a record of personal memories that can be shared with family and the local community, as well as a contribution to the field of environmental studies.

Participation is completely voluntary and may be withdrawn at any given time without penalty. Please be assured that you do not have to answer any question that you wish not to answer.

Contact information is

Susan Leopold
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540 364 9996, Leopold@igc.org

If you have any questions regarding your rights as a research participant, please contact

Dr. Kevin Lyness, Chair of the Human Research Committee, 9603) 283-2149, or Dr. Steven Guerriero, Vice President of Academic Affairs, (603) 283-2416
Appendix II. Images from Allard’s Journal

The six locations that Allard most regularly visits are: 1) Riley’s cabin, 2) Dawson’s homestead, 3) House by sharp turn, 4) Stone fence and quarry, 5) Matrimony vine, and 6) Spring.

1) Riley’s Cabin

1a) The home that the Rileys latter squatted on
2) Dawson’s Homestead is only referred to in journal text

3) House by sharp turn
4) Stone Fence and quarry, highlighted in green he notes: old abandoned cabin, old field now in corn, fence row, flag stone quarry, fence row with peach tree, fallen black walnut, and old home site.
5) Matrimony Vine

Trip into Bull Run Mt April 24, 1865

[Hand-drawn map with labeled locations: High Tree, Broad Run Rd., Old Hill, Matrimony Vine]

Row path led from old mill of the right line of the
now north to the right line of the old house stood
with field at right where an old house stood with
claim and wall, valley back to road way, and
Matrimony Vine, then back to road way.
6) Springs

Plants found in Bull Run Mts., April 1875.

At an - colony of Muscari racemosum (L.) Will. in full bloom; the only locality as yet located in Bull Run Mts.

Chrysoreuma americana - Schrein. a good patch in wet ground and spring shown.