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Date 26 November 1986

THE IMPACT OF AUDIENCE IN TECHNICAL WRITING

A Thesis

Presented for the

Master of Arts

Degree

The University of Tennessee, Knoxville

Ellen Priestley Wright

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DEDICATION

This thesis is dedicated to my parents, Ruth and Robert Wright. Their unfailing support and encouragement have been an integral and vital part of my life. Without them, my graduate program would not have been possible.

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In the course of thesis research, a number of scholars have assisted me generously. In particular I am indebted to Professors Michael Keene, Lydia Pulsipher, Mary Richards, and William Shurr, who served as my director and committee respectively. With their consultation, criticism, and encouragement, I was able to achieve results otherwise impossible. Whatever errors remain in my work, however, are solely my responsibility.

ABSTRACT

The ability to communicate clearly in writing requires more than a knowledge of the information to be communicated. Equally important is the writer's knowledge of his audience. This thesis examines the impact audience has on the presentation of information.

Research was conducted to understand the cultural and educational differences between the North American college educated audience and the West Indian seventh grade educated audience. Interviews, field work, and personal observations were conducted both in the United States and in Montserrat, an island in the West Indies. In addition, a popular newspaper from each area was examined and selected passages from those newspapers subjected to two tests which determine educational reading levels.

Considering the fast pace maintained by most people in the United States, a writing style which emphasized clarity and concision was needed for the North American audience. After living in Montserrat three weeks and meeting various Montserradians, I realized their knowledge is rooted in practical experience, rather than being rooted in formal education, as is characteristic of North Americans. Therefore, a less technical writing style than that used for the North American audience was needed for the West Indian audience. The West Indian audience also needed a writing style which could keep the reader's interest and highlight cultural ties between the past and the present.

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CHAPTER I

THE IMPACT OF AUDIENCE IN WRITING

Reader Benefits

In his essay, "Democracy and the Arts," Rupert Brooke states that "easy writing...makes damned hard reading."¹ Perhaps no other quote encourages careful writing, and endless rewriting, with such terse vigor--and all for the purpose of successfully transferring the author's ideas to a reader. Therein is the point of writing--that, through a particular combination of words, something new may be communicated to the reader.

A clear understanding of what an author is trying to communicate is the primary benefit one gains when reading a book or article. In technical writing, the transfer of information is not only contingent upon the author's familiarity with the specific technical information presented, but also with the author's familiarity with the audience to whom the writing is addressed. Without a clear knowledge of his or her audience, the author may fail to make the technical information clear and interesting.

¹Rupert Brooke, "Democracy and the Arts," in Rupert Brooke. eds. Walter de la Mare and Maurice Browne (Port Washington, New York: Kennikat Press, 1946), p. 6.

A second benefit to the reader--facilitated action--is equally dependent upon the author's knowledge of his or her audience. If the author is not familiar with the audience, he or she may choose to emphasize the wrong areas or choose the wrong writing style, thus leaving the audience unchallenged and unchanged.

Beyond these two basic reader benefits is an entire range of smaller personal benefits which changes from reader to reader and from day to day, as a single reader grows and learns. To gauge the reception of reader benefits is practically impossible. However, some studies do attempt to gauge the audience's relationship to the material. These studies, known as readability studies, offer an interesting although limited quantitative approach to audience research.

Readability Studies, with Specific Tests on
North American and West Indian
Reading Material

Among readability studies, two stand out as pre-eminent: Robert Gunning's Fog Index and Rudolph Flesch's Reading Ease Formula. These formulas, like almost all readability formulas, count syllables, words, and sentences, thereby determining the reading level of a particular work. Gunning's Fog Index calculates the average number of words per sentence, the average number of syllables per word, and the

percentage of "hard" words (words of three syllables or more).² Flesch's formula counts the average number of words per sentence and the average number of syllables per hundred words to determine a "reading ease" score, and secondly, counts the number of "personal words" (pronouns, names) and "personal sentences" (spoken sentences, questions, commands, exclamations) to determine a "human interest" score.³

As a means of determining the typical reading level for a North American and a West Indian, I used the Fog Index and Reading Ease Formula to analyze two newspapers--The Atlanta Constitution and The Montserrat Times. Three 100-word passages were chosen from each paper, and the readability tests calculated. According to the Fog Index, The Atlanta Constitution has an average of 19 words per sentence, an average of 1.75 syllables per word, and an average number of 1.85 hard words per sentence. These figures give The Atlanta Constitution a Fog Index score of 11, equivalent to the eleventh grade reading level. According to the Reading Ease Formula, The Atlanta Constitution has a reading ease score of 44.5--in the difficult to fairly difficult range--and a human interest score of 8.5--in the dull to mildly interesting range.

²Robert Gunning, The Technique of Clear Writing (New York: McGraw-Hill, 1968), pp. 37-40.

³Rudolf Flesch, The Art of Readable Writing (New York: Harper & Row, 1974), pp. 247-251.

These same formulas were calculated using three 100-word passages from the North American article (Chapter IV, Part A) in this thesis. The Fog Index gave this article an average of 25 words per sentence, an average of 1.9 syllables per word, and an average number of 4 hard words per sentence. These figures give the North American article a Fog Index of 15, equivalent to the college junior level and slightly above that of The Atlanta Constitution. According to the Reading Ease Formula, the North American article has a reading ease score of 61.5--in the fairly difficult to standard range--and a human interest score of 5.6--in the dull range.

As applied to three 100-word passages from The Montserrat Times, the Fog Index calculates this paper to have an average of 20 words per sentence, an average of 1.08 syllables per word, and an average number of 2.3 hard words per sentence. These figures place The Montserrat Times at the seventh grade level. According to the Reading Ease Formula, The Montserrat Times has a reading ease score of 107.8, a score which exceeds the maximum "very easy" score. The paper's human interest score is 19, or mildly interesting to interesting.

The West Indian article received the following Fog Index scores: an average of 17 words per sentence, an average of 1.03 syllables per word, and an average number of 3 hard words per sentence. Thus, the Fog Index place the West Indian article between the seventh and eighth grade levels. Using the Reading Ease Formula, the West Indian article has a reading ease score of 102.4, which,

like The Montserrat Times passages, exceeds the maximum "very easy" score. A human interest score of 18.3 characterizes the article as mildly interesting to interesting.

As determined by the Gunning and Flesch readability tests, there are quantitative similarities between the North American newspaper and article and the West Indian newspaper. Although the tests may accurately reflect these similarities in reading ease and human interest (as in Flesch), grade level determinations are much less definite or indicative of the sophistication of writing style. For example, Gunning's Fog Index gives D. H. Lawrence's Lady Chatterley's Lover a sixth grade score and John Steinbeck's The Pearl a seventh grade score.

As evidenced by the reading levels given Lawrence and Steinbeck's books, definition of audience goes beyond the average number of words per sentence or syllables per word. Other methods, therefore, must be used in conjunction with readability tests to insure a work is written properly for a particular audience.

Audience Studies

Audience has been a concern of rhetoric theorists for centuries. Horace, Henri Bergson, M.H. Abrams, to name only a few theorists, have written about the impact audience has in writing. A contemporary article of particular insight is Barry Kroll's 1978

article "Cognitive Egocentrism and the Problems of Audience Awareness in Written Discourse."⁴

Kroll believes each author creates a character context. The author must shape the information to fit within the context of the character, or the audience addressed. The more an author sublimates personal thought processes and elevates the thought processes of the audience, the more successful the work will be. As Kroll himself states:

Writers who can decenter their perspective, taking the view of a hypothetical readership, are more likely to display audience awareness than writers who are embedded in their personal view of reality.⁵

Ideas like Kroll's offer methods of defining audience which, while less quantitative, create a more consistent picture of the audience for the author than do readability tests. The work's conception to its end. The constant presence of the audience in the author's mind sets a consistent tone and makes the choice of materials and method of presentation simpler. Following Kroll's advice, I define the two audiences (North American and West Indian) in the following chapter before addressing them in Chapter IV.

⁴Michael Keene and Marilyn Barnes-Ostrander, "Audience Analysis and Adaptation," in Research in Technical Communication: A Bibliographic Sourcebook, ed. Michael G. Moran and Debra Journet (Westport, Conn.: Greenwood Press, 1985), p. 166.

⁵Ibid.

CHAPTER II

INTRODUCTION TO THE SPECIFIC AUDIENCES ADDRESSED

William Hazlitt may have considered facts "stubborn things," but there is no denying their necessity when assessing the true nature of a situation.⁶ For the report writer, facts (1) comprise the content of the report, (2) delineate the characteristics of the reader, and therefore (3) dictate the manner of presentation. It is the writer's role to choose and arrange the needed facts in such a manner as to give maximum benefit to the reader. In order to accomplish this task, the writer must develop a strong sense of who his reader is and what that reader is like. This pursuit is the definition of audience. Characteristics tables I and II and two prose definitions follow, describing the two audiences dealt with in this work.

⁶William Hazlitt. "The Fight," in The Best of Hazlitt. ed. P. P. Howe (London: Methuen & Co. Ltd., 1959), p. 129.

TABLE I. THE NORTH AMERICAN AUDIENCE

Level (layperson, executive, technician, expert): executive

Age: 40

Extent of Schooling: 16 years of public school
(four year college graduate)

Occupation: general business managerial position, working
an average of 46 hours per week

Income: \$30,000.00 per year

Pastimes: watching television, watching movies, playing
tennis, club ctivities, family vacations,
shopping

Prior Experience Related to Subject: none

Purpose in Reading Report: to broaden perspective of West
Indian culture and for personal
educational growth

Source: 1986 World Almanac, and personal observations.

TABLE II. THE WEST INDIAN AUDIENCE

Level (layperson, executive, technician, expert): layperson

Age: 40

Extent of Schooling: 9 years of public school
(equivalent to U.S. seventh grade)

Occupation: manages small neighborhood grocery/bar with
husband, working an average of 41 hours per week

Income: \$2600.00 East Caribbean per year (equivalent to
approximately \$1000.00 U.S.)

Pastimes: conversation, watching television, household
chores (i.e. food preparation, gardening,
laundry), reading (i.e. Bible, Montserrat
newspaper, romances, Nancy Drew mysteries)

Prior Experience Related to Subject: cultural background,
has heard stories since
childhood about the past
from elders, personal
interest in how ancestors
lived and worked

Purpose in Reading Report: to better understand how
ancestors lived and worked,
and to broaden knowledge of
Montserratian homeland

Source: 1986 World Almanac, and personal observations.

The North American Audience

Imagine the average American man. Forty years old, married, with two children in their early teens, and the stereotypical pet dog. This man, who shall be named Bill, is the targeted audience for North America. To become fully acquainted with Bill, spend a day with him.

Seven a.m.--a clock radio comes on playing a mellowed version of a popular song. Bill drags his 6 foot, 180 pound body out of bed, showers, shaves, and quickly brushes his short, dark brown hair. Next, Bill dresses: boxers, T-shirt, light blue shirt, navy socks, navy and red striped tie, conservatively cut navy suit, black belt, black shoes. Once dressed, Bill fills his pockets with an assortment of pens and loose change, a handkerchief, his wallet and checkbook. A final glance in the bathroom mirror, and Bill is downstairs and ready for a hurried breakfast with his family.

Considering the fast pace kept by most families in the United States, it seems all too plausible that "breakfast with the family" is rapidly becoming an antiquated event. And so it is at Bill's house. Bill's two children, both in their early teens, offer a fast but smiling "morning, Dad," grab a slice of toast, and hurry out the back door to meet the schoolbus. Bill's wife tries not to think about the three food groups missing from her children's breakfast diets, smiles in exasperation, and gives Bill a good morning kiss. She wants

to run by the dry cleaner's before work though, and so after eating several spoonfuls of cereal, she too is gone. Bill pours himself a bowl of cereal, eats, sets his empty bowl in the sink, and is out the door.

The drive to work is relatively uneventful. Traffic, stop lights, and the search for a parking space downtown greet him, one by one, like clockwork. The pace only picks up for Bill for he arrives at the computer software company where Bill is a middle-level manager.

There are presentations all morning, a lunch meeting at noon, two interviews with prospective employees in the afternoon, and incessant phone calls interspersed throughout. Consequently, Bill ends up with about an hour and a half to complete his day's agenda. He begins by reading through the phone messages the secretary has left on his desk: (1) next Monday's client meeting has been postponed until Tuesday at the same time, (2) Phil wants to play tennis sometime Wednesday or Thursday--call him tomorrow, (3) Mr. Hyle wants the 1986 sales analysis summary by Friday, (4) Leisure Travel called to confirm your November 1-7 flight and hotel reservations for the West Indies, (5) the graphics department has your presentation visuals ready, (6) call Pam in Human Resources--extension 2013--about today's interviews as soon as possible. Bill returns the necessary phone calls, beginning with a call to his wife saying he'll be home a little late.

Half past six, Bill leaves the office, walks back to his car, and drives home. The dog sits under a tree, but when Bill gets out of

the car, the dog follows him inside. The children lie on the family room floor, watching television and reading their textbooks during the commercials. Bill's wife warms his dinner in the microwave and sets it on the kitchen table. She pours herself a cup of coffee and goes through the mail while Bill eats. They discuss their respective days, the children, and the family's weekend plans--a chili dinner and watching the last World's Series game with the neighbors, their son's high school football game, a trip to the shopping mall with their daughter.

Bill's wife thumbs through the mail--Newsweek, Fortune, Seventeen, two letters, the VISA bill, a packet from Leisure Travel. Bill finishes his dinner and he and his wife move to the family room. Bill sits in his favorite chair, and opens the Leisure Travel packet. Their travel agent has sent them several articles to help acquaint Bill and his family with West Indian history and culture before they start their vacation. He begins to read the first article (THE GALWAYS PLANTATION, MONTSERRAT, AS WRITTEN FOR A NORTH AMERICAN AUDIENCE--part A of Chapter IV in this thesis).

Bill reads several of the travel articles, and then goes through the rest of the mail. The children go upstairs to bed. Bill and his wife watch the news, and then go upstairs to bed themselves.

The West Indian Audience

The preceding list of characteristics presents a general picture of the typical West Indian audience. Build upon that framework by accompanying Sally, a 40 year old Montserratian woman, through a typical day. Note: area names have been spelled in the accepted West Indian manner (i.e. St. Patricks rather than St. Patrick's).

A rooster crows in Sally's front yard, heralding the barely visible West Indian sun. Sally wakes her husband, gets out of bed, and changes into a clean--but faded--blue cotton dress. Next, she calls out to her three children sleeping in the next room.

Within minutes, everyone is up and getting ready for the day. While Sally prepares breakfast, her husband and children take water to their donkey, cow, and chickens. Breakfast is soon ready--cups of sweetened tea and slice of bread. With the morning chores completed, everyone sits down at the table to eat.

After eating, Sally puts the leftover bread away. The children collect their book bags for school, and Sally's husband prepares to go to the neighborhood grocery store/bar, which he and Sally operate at Centre Square. Since it is a Wednesday--open-air market day in Plymouth--Sally is going into town to buy a newspaper and shop for pineapples. Sally takes down a cloth sack from a nail in the kitchen wall. She uses the sack to bring home any purchases from town. Soon everyone is out of the house and walking off in various directions.

Sally and her husband walk as far as Centre Square together. Several of the older St. Patricks men are already sitting on the Centre Square steps, talking and telling jokes. Sally and her husband wish the men a good morning, the traditional Montserratian greeting for any time before noon. Her husband goes in to open the store, and Sally heads on toward Plymouth.

Several small cars pass Sally, slowing when they near her so as to offer her a ride. The breeze and cool morning air are so enjoyable though, that Sally declines each ride and continues walking. In a half hour or so, she is entering Plymouth.

Even at eight in the morning, Plymouth is already busy. Cars and taxis whiz through the streets. People on their way to work, market, or those just out to enjoy the morning, fill the sidewalks. As Sally walks along, "good morning" rises from every direction, and Sally offers her own "good mornin'" to those she passes.

Across the street is a bookstore. Sally crosses the street and asks the cashier for an issue of The Montserrat Times. The cashier takes an issue from an adjacent table and rings the sale up on the cash register. Sally buys the weekly paper often, feeling comfortable with the easy style and friendly tone of its articles. Sally thanks the cashier and puts the newspaper into the cloth sack, folding the sack to a size which she can carry easily. She then retraces her steps back to the market.

When Sally arrives at the market, the wooden tables are already filled with the fresh fruit and vegetables women have grown and

brought to sell. Sally walks over to the pile of pineapples, looks them over, and begins to haggle over the price. She considers the woman's price too high, though, and decides to forego purchasing the pineapples in town. Instead, she will go to her neighbor, who sells pineapples at home, and find out the price she is charging.

Just then, a long, loud honking sound resonates through the streets. At the corner of the market building, a man blows into a hole cut in the end of a conch shell. This action creates the honking sound, thereby notifying everyone that fresh fish is for sale. Sally joins the crowd around the fishermen and has soon bought a large gar. Lying to the side of the fish pile are several shallow cardboard boxes. Sally takes one of the boxes and puts the fish in it, balances it on her head, and heads back to Centre Square by way of Miss Joseph's house.

As she nears Miss Joseph's house, Sally calls out her "good mornin'." Miss Joseph looks up from her garden and puts down the hoe she has been using. The two women talk energetically for a few minutes, and then Sally asks about the pineapples. Miss Joseph and Sally agree on a price, and then head toward Miss Joseph's shed. Miss Joseph puts several pineapples in an empty flour sack and weighs them. Sally pays Miss Joseph, and they transfer the pineapples from Miss Joseph's sack to Sally's sack. After a little more conversation, Miss Joseph returns to her garden, and Sally resumes her walk home, balancing her purchases on her head.

Sally soon reaches Centre Square. She greets the men on the front steps and then her husband, who stands behind the bar, talking

with two men. Sally walks around behind the store counter, and sets her morning purchases down on the floor of the store behind the counter.

The remainder of Sally's morning passes quickly. Several people from St. Patricks come and buy grocery items, such as brown sugar, potatoes, and salt fish cakes. Several other people stop by to get something cold to drink from the bar, while others just stop by to talk with Sally and her husband.

Around noon, Sally leaves the store and goes home to prepare a lunch for herself and her husband. She puts some boiled sweet potatoes in a bowl and a bottle of pepper sauce in her pocket and walks back to the store with the food so she and her husband can eat together. While they eat the sweet potatoes, they have a Ting citrus soft drink. After lunch, Sally and her husband continue to wait on the sporadic customers and talk to friends as they come by Centre Square.

In the late afternoon, Sally's husband runs the store alone. Sally goes home, carrying the morning's purchases on her head. As she nears the house, she sees her children walking up the last hill on their way home from school. By the time they are in the yard though, she has already drawn and given water to the cow and is coming back to get a second bucketful for the donkey. Under Sally's direction, the children quickly change clothes, finish the afternoon chores, and play together in the yard and street. Meanwhile, Sally is busy preparing dinner for the family. She cuts up several large sweet potatoes and drops them in a pan of water to boil. She also skins the

gar and places it on a grate. Next, Sally goes outside and builds a small fire in the middle of a circle of stones. She rests the grate on the stones and then goes back inside and slices several of the pineapples, putting the slices on a plate.

Sally's husband is soon home, the children following behind him and talking energetically to one another. Each child seems to have quite a lot to say, but they all pause long enough to say a prayer of thanks for their dinner. After serving the boiled potatoes, fish, and pineapple slices, Sally and her family go outside to eat and enjoy the cool breeze. As they eat, the children talk about upcoming school activities. The two youngest children are to go on a class field trip to the White River waterfall next week. The oldest child's class is about to start a study of Montserrat's past lifeways. In their reader is a section of stories about folk tales, folk ways, and the Caribbean's first sugar plantations. In addition, each child is to ask older Montserrations about any remembrances they may have about the ways things were done in the past. Sally and her husband tell the children stories about plantation life and the way life was in the olden days. As children, Sally and her husband heard these stories from their parents and grandparents. These grandparents had, in turn, heard many of the stories from their parents and grandparents.

While the conversations continue, Sally gets up to put away the leftover potatoes and fish. The children wash the dishes and then go back outside to play until dark. Sally's husband walks back up to the Centre Square store to open the bar for any evening patrons. Since

the sun is still offering good light, Sally decides to go back outside and read part of the newspaper she bought earlier in the day. She flips through the pages, glancing at the photographs and simple headlines. The paper has been running a series of articles on West Indian culture and history, and Sally wonders whether they have included another such article in this issue. She turns to the middle of the paper and sees an article on the Galways plantation. (The article is equivalent to part B of Chapter IV in this thesis THE GALWAYS PLANTATION, AS WRITTEN FOR A WEST INDIAN AUDIENCE.) She begins reading the article, intrigued by the personal familiarity of the topic and the photographs.

All too soon, the sun has set. Sally gives up her reading for the night and places the newspaper on the kitchen table so she will remember to take it with her to the store in the morning. The children come inside, wash and prepare for bed, as does Sally. Sally lies awake for a while, thinking about the Galways plantation, and waiting for her husband to return home. In a couple of hours, her husband closes their bar for the night, walks home, changes clothes, and gets in bed. Fanned by the perennially cool night breeze blowing in through the windows, everyone is soon asleep.

CHAPTER III

THE GALWAYS PLANTATION, MONTSERRAT AS WRITTEN FOR TWO DIFFERENT AUDIENCES

To illustrate the textual changes necessitated by writing for different audiences, this chapter presents two articles (parts A and B), one for each of the audiences described in Chapter II. Due to the nature of each audience, and especially that audience's purpose for reading the article, certain differences in structure and content will become readily apparent. The style of headings and referencing differs for each article and has been chosen to accomodate most readily the needs of that particular audience. In addition, the amount of technical information and folk information presented differs according to the audience's purpose for reading the article. Also evident is the difference in reading levels (involving word choice, sentence length, number of syllables) between the two articles. An analysis and defense of the differences necessitated by writing for these different audiences comprises Chapter IV.

A. THE GALWAYS PLANTATION, MONTSERRAT,
AS WRITTEN FOR A NORTH AMERICAN AUDIENCE

1. GEOGRAPHY OF MONTSERRAT

Montserrat is a very lush and geographically interesting island. Its physical characteristics had an important impact on settlers from Europe and Africa.

1.1 TOPOGRAPHY

The island of Montserrat lies at 16 degrees latitude in the eastern Caribbean (Figure 1). It is a small island--only 39 square miles--yet despite this small size, offers an array of landscapes: rain forests, arid regions, black sand beaches, white sand beaches, as well as coastal areas with steep, rocky cliffs and no beach at all.

These landscapes are scattered over a series of three ascending volcanic mountain ranges: the Silver Hills, Centre Hills, and Soufriere Hills (Figure 2).¹ The Silver Hills are the oldest and most eroded of the three mountain ranges. These hills are located in northern Montserrat and rise to 1000 feet. The land is characteristically dry and supports only sparse vegetation.

The Centre Hills are located on the western side of the island and rise to a height of 2000 feet. These hills are well watered, especially at high elevations and along the center of the west

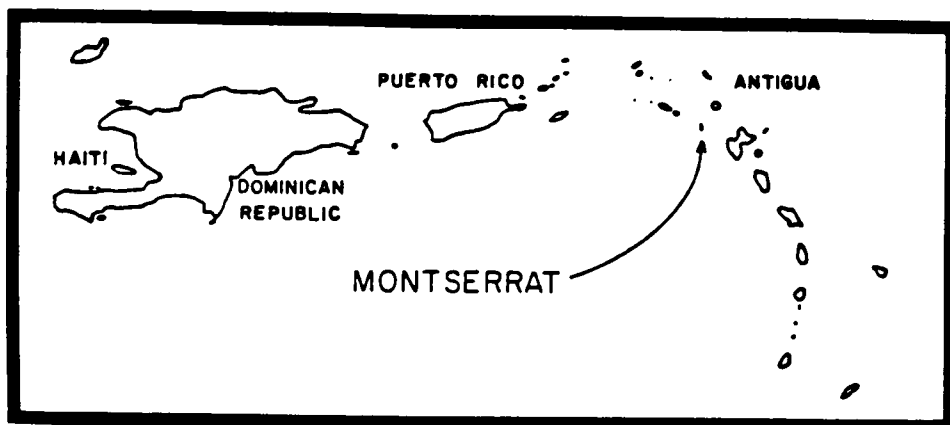


Figure 1. The island of Montserrat in the West Indies.

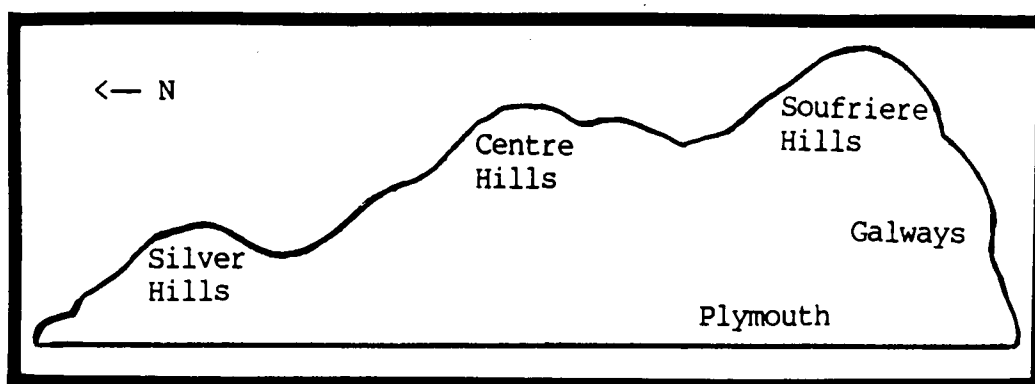


Figure 2. Profile of Montserrat showing the Silver Hills, Centre Hills, and Soufriere Hills.

slopes. Consequently, this range supports a thick tropical vegetation of tall trees, thick shrubs, heavy vines, and grasses.²

The final volcanic range--the Soufriere Hills--rises 3000 feet above sea level on the southern portion of the island. Like the Centre Hills, the Soufriere Hills are also well watered, especially at high elevations and along the center of the west slopes. The heavy natural vegetation is also consistent with the Centre Hills.³

Lying between the Centre Hills and the Soufriere Hills is a broad, well-watered valley. This valley sweeps down to both the western and southern coasts, forming broad alluvial fans.⁴

1.2 CLIMATE

Montserrat is consistently warm and humid. The winter and summer average temperatures range between 80 and 86 degrees Fahrenheit. The annual average humidity is 75 percent, with the heaviest precipitation occurring in April and May.⁵ In spite of these relatively high temperatures and humidity levels, the island is generally pleasant due to cloud cover and a nearly constant breeze.

In southern Montserrat, elevations below 900 feet are typically dry even when the rest of the island is very wet. Because of wind patterns and the topography of the island, rainfall often blows to the northeast, bypassing much of the lower regions.⁶

2. MONTSERRAT--1493-1860

Montserrat first became known to Europeans on Sunday, November 10, 1493. This earliest introduction to the island is recorded in

Ferdinand Columbus's account of Christopher Columbus's second voyage: "the Admiral weighed anchor and sailed with the whole fleet along the coast of the island of Guadeloupe towards the north-west for Hispaniola, and came to the island of Montserrat."⁷ Christopher Columbus chose the name Montserrat, which means serrated mountain, because of the island's jagged topographical appearance.⁸

Spain did not prove interested in the smaller islands of the Caribbean, preferring to use the larger islands to the north for launching their exploratory campaigns. A century and a half after Columbus, however, Montserrat was sought after by the British.

2.1 SETTLERS

Montserrat was first settled as a British colony in 1632 by a group of English and Irish who came from the nearby island of St. Kitts.⁹ Around 1650, African slaves were brought in to supplement the labor of the several thousand Irish indentured servants. By the mid-seventeenth century, a definite social structure had taken shape on the island: English and Irish landowners formed the small upper class, served on the Council and Assembly, and made and enforced the laws; Irish servants made up the much larger working class; and the lowest rung of the social ladder was occupied by a relatively small group of slaves, probably only several hundred by 1654.¹⁰ By 1700, the population of Montserrat consisted of about 700 English, 2000 Irish, and 1000 Blacks.¹¹

2.1.1 The English

The English, Irish, and Africans were not evenly distributed over the mountainous terrain of the island. In the seventeenth

century, most of the hundred or so English and the few wealthy Irish who formed the planter class had their plantations on the choicest land along the gradual slopes of the western coast and also in the valley between the two major mountain ranges (the Centre and Soufreire Hills).¹²

2.1.2 The Irish

In contrast to the English, the Irish population was concentrated on very undesirable land on the southwestern side of the island in an area called St. Patricks. Of the 3000 people on the island in 1677, roughly 2000 were Irish. The majority of these Irish lived in St. Patricks, on less than 10 percent of the total island territory. The Irish were so segregated because they were viewed by the island leaders as a serious threat to civil tranquility. Many of the Irish indentured servants had been political dissidents in the Cromwellian period.¹³ The English were therefore leery of further Irish uprisings when the indentured servants tired of plantation life, which offered only unrewarding hard labor and a relatively small chance of upward mobility.

The English opinion of the Irish lower class was not undeserved. There is strong evidence that the Irish of St. Patricks formed a coalition with Carib Indians and aided the French attack of 1667, during which enormous damage was inflicted on the crops, sugar works, and warehouses of the British.¹⁴ The British did treat the Irish with some degree of decency though; indentured servants who had fulfilled their terms were given plots of land for their subsistence.

Even so, these plots of land were generally on the steep, rocky, and erosion-prone lower slopes of the Soufriere Hills. The dense population, severe physical conditions, and St. Patricks' difficult accessibility to the sea (due to choppy water and steep, unstable sea cliffs), meant that the English could contain the Irish in St. Patricks and assure that they would neither prosper nor be able easily to leave the island.¹⁵

2.1.3 The Africans

Enslaved Africans were only brought to Montserrat after sugar production began to be an important business on the island--around 1650. Slaves were brought to supplement the work of Irish indentured servants. Some lived on English plantations, others on wealthy Irish plantations. Besides living on plantation, one or two slaves were often apportioned to poorer families without plantations. Slaves also comprised labor gangs, which were hired out by their owners to plantation owners. Like the Irish, however, the Africans created many problems. Laws were passed determining punishment for such crimes as setting fields afire, irresponsibly cutting cane tops to use as animal fodder, and running away. Yet even with these problems, African slaves continued to be brought to Montserrat and, by the early 1700's, outnumbered whites five to one.¹⁶

2.2 SUGAR

Prior to the 1650's, plantations grew tobacco, indigo, and cotton. Of these three crops, tobacco was the main cash crop. Due to the differing nature of soils and weather patterns over the island,

the tobacco was uneven in quality. Despite this shortcoming, Montserrattian tobacco enjoyed a good market until the emergence of the Virginia tobacco regions. Montserrat proved incapable of competing with this large, high quality market and, beginning in 1650, more attention was given to a new crop--sugar cane.¹⁷

2.2.1 Sugar Production and Exportation

The early sugar produced by the plantations was of such a poor, unrefined quality that English merchants refused to transport it.¹⁸ Tobacco, therefore, remained the mainstay of Montserrat's economy for some time but by 1670, international demand for sugar increased, and sugar replaced tobacco as the main cash crop. Accompanying this shift came a change in Montserrat's trading patterns. By 1672, the Dutch, formerly Montserrat's largest trade partner, met with heavy competition from English traders for Montserrattian goods. Ten years later, the island was firmly established as a sugar producer, sending England an annual 2,001,700 pounds of sugar, while exporting only 47,500 pounds of tobacco to the mother country. Sugar trade reached its height in 1700, with Montserrat sending an annual 29,000,000 pounds of sugar to England and Wales.¹⁹

2.2.2 Drawbacks to Sugar Production and Exportation

In spite of such outstanding trade, duty taxes imposed on Montserrattian exports by Great Britain quelled the economic success sugar could have facilitated. In 1674, the duty tax was relinquished but Montserrat was already in such a tight financial state that this act did little to bolster Montserrat's economy. Added to the burden

of this financial strain, were the problems of a labor shortage, harrassment from the French and Carib Indians, and a poorly organized island militia. Consequently, by the late 1670's, many Montserrations left the island. In spite of a population decline, many new sugar plantations were built on Montserrat in the eighteenth century. In addition, large mechanized sugar plantations were established during this period in Cuba and Brazil. Furthermore, the sugar beet had been developed in Europe as an alternate source of sugar. As a result, the world supply of sugar increased while its demand in Europe decreased. This shift caused Montserrat's trade market to decrease, and sugar production on the island to dwindle.²⁰

3. DEVELOPMENT OF GALWAYS PLANTATION

Plantations were an important colonizing institution throughout the Caribbean. By examining the establishment, expansion, and subsequent decline of the Galways plantation, one gains an appreciation of the role plantations played in the development of modern West Indian society.

3.1 ESTABLISHMENT

David Galway founded one of the many plantations begun during the seventeenth century. As a planter, Galway was an exception. While most of the landowners and plantation managers were English, Galway was Irish.

The location of Galway's plantation was also an exception. Galway did not locate his plantation on the gentle, west slope, but

on the steep slopes of the Soufriere Hills in the southwestern part of the island known as St. Patricks (Figure 3).²¹

Whereas, the plantation overlooks the dry, rocky hillsides which were at that time densely occupied by the freed Irish, its position at 1100 feet above sea level is well within the area that receives rainfall several times a day during much of the year. Despite the fact St. Patricks is dry and unproductive, the high elevation of Galways made possible profitable sugar production, at least for a time.

3.2 EXPANSION

David Galway was not only a landowner in St. Patricks, but also a captain in the militia by the 1660's and, later, a member of the island council.²² As Galway's standing in the Montserrat community grew, so did his plantation.

By 1677, his census tract contained over 300 Irish and 74 enslaved Africans. The census of 1729 shows Galway owned thirteen horses, seven mules, thirty-one head of cattle, thirty-two sheep, two hogs, ten goats, and sixteen firearms. Most significant is the fact that Galway owned over 1300 acres of land, making his plantation by far the largest in the entire island.²³

3.3 DECLINE

Although Galway's land holdings were extensive, only about one-tenth of the arable land was planted in sugar, the main cash crop of the day.²⁴ Research has shown that the ratio of total land held to that planted in the main cash crop was often about ten to one. Other

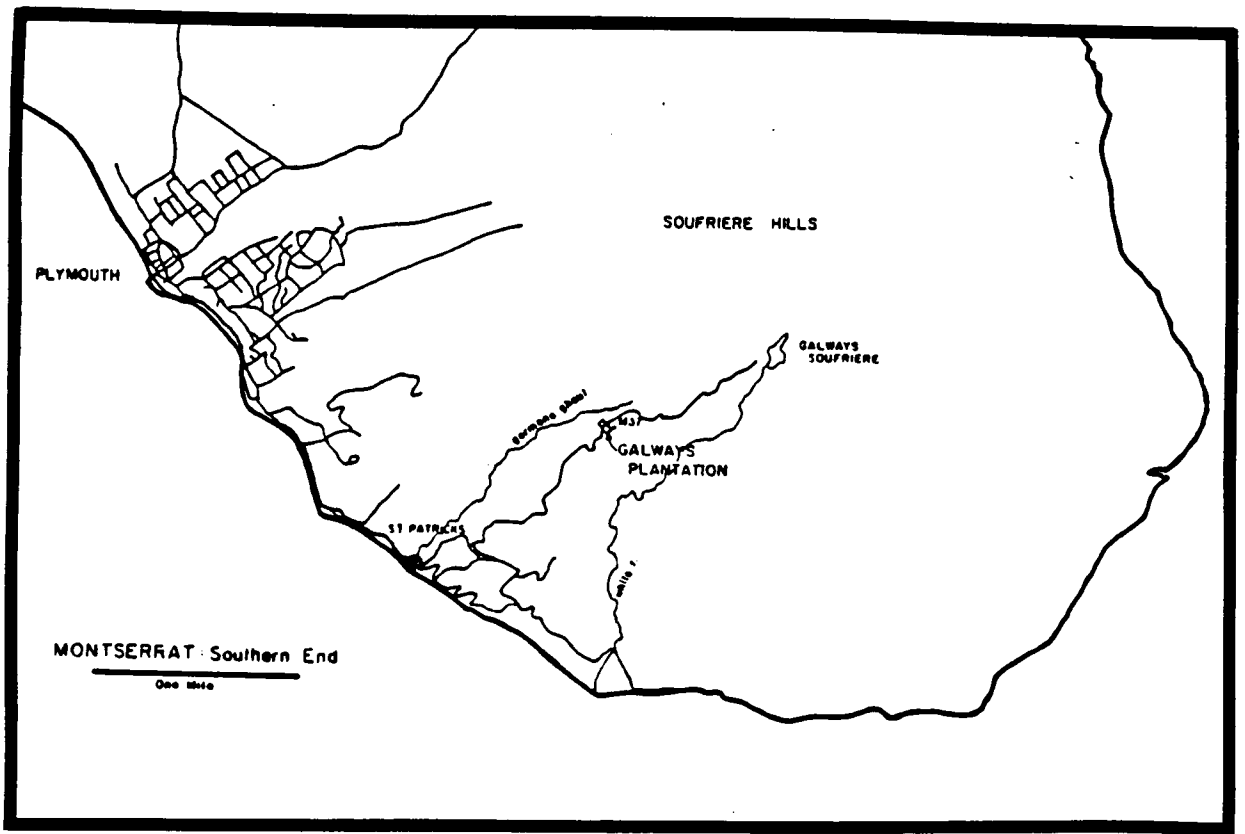


Figure 3. Galways location in the Soufriere Hills.

portions were used for grazing animals, growing food crops, or were allowed to lie fallow. Another reason for the small proportion of land in sugar may be that Galway had trouble retaining a work force. Many indentured servants left the island as soon as their terms expired. In 1677 there were 1228 whites in St. Patricks. By 1729 there were only 202 whites, a reduction of 84 percent.²⁵

In addition to a lowered work force, Galways plantation may have operated on a lower level of efficiency than most other plantations of its time. By the early eighteenth century, the more advanced planters used windmills rather than cattlemills to extract cane juice, but Galway continued to use only a cattlemill until 1750.²⁶ After that time, a windmill was built and used together with the cattlemill.

Sometime in the 1750's, the then owner of Galways decided to build a large, new sugar processing complex and to cultivate some of the marginal land of the plantation.²⁷ Yet, much building was going on all over Montserrat at this time due to increased markets. As mentioned earlier, however, large mechanized sugar plantations were also built during this period in Cuba and Brazil. Due to these plantations, and the development of the sugar beet in Europe, Galways market dwindled sharply. By the early 1860's, the plantation was abandoned.²⁸

4. GEOGRAPHY OF GALWAYS PLANTATION

Census data for 1730 assesses the plantation's land area to be 1300 acres.²⁹ When the plantation was active, many buildings and

fields would have been easily visible (Figure 4). Today though, only the industrial complex (mills, boiling house, barn/warehouse, cisterns), and the domestic complex (great house, retaining wall) are discernable. The physical geography of the plantation, however, remains relatively unchanged.

4.1 PHYSICAL GEOGRAPHY

Galways plantation is located in St. Patricks parish in southwestern Montserrat. It is built on a steep volcanic finger that grades from 3000 feet to sea level in less than two and one-half miles.³¹

4.1.1 Water

Due to the steep gradient and geographical position of Galways, both excesses and shortages of water posed problems for cultivation. Too much water in the form of rainfall and runoff created problems of erosion, flooding, and the leaching of nutrients from the soil. Cross-slope retaining walls controlled sheet erosion, and an exterior, outward-sloping stone floor running the length of the sugar boilinghouse drained water away from that structure and into a subterranean stone tunnel.³² In addition, numerous paved stone walkways surround the great house, decreasing soil erosion.

Water shortages posed an equal problem. Even so, no well or spring has been found on the plantation site. The plantation relied instead on distant springs and a variety of stone and earthen catchments to trap rainfall and runoff. This will become evident in the later discussion of physical structures on the plantation.

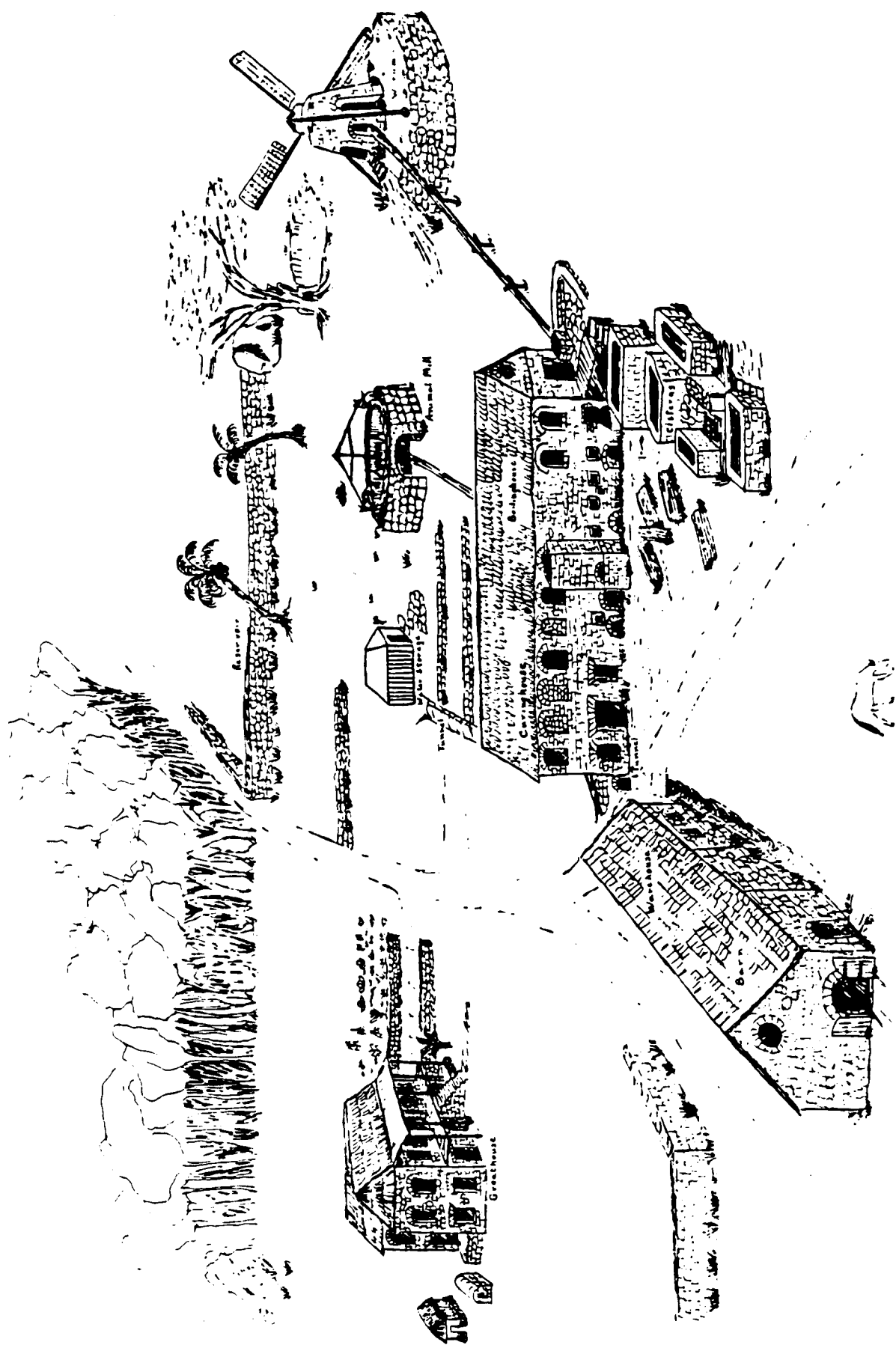


Figure 4. An artist's conception of Galways in 1730.
 (Source: Lydia Pulsipher)

4.1.2 Soil

The top soil at the plantation is a "dark brown granular volcanic soil." Beneath the top soil lies a layer of clay, and below that, a layer of hardened volcanic flow.³³ Coupled with the rainfall the Galways area received, this soil would have supported crops with relative ease. Below the line of rainfall though (approximately 900 feet), crop cultivation would have been difficult at best.

4.2 PHYSICAL STRUCTURES

The industrial complex is located on the southern side of the plantation and, with the great house and storage building, occupies a 1.5 acre tract of land.³⁴ To the north of the industrial complex are the remains of the great house with its massive retaining wall.³⁵

4.2.1 The Mills

Upslope from the boiling house and cisterns are the remains of two structures used for crushing cane. The first of these is a cattlemill. The second is a windmill.

4.2.1.1 The Cattlemill Approximately fifty feet to the east of the boiling house lie the ruins of a cattlemill. Cows were yoked to sweeps connected to a center post in the mill. The animals walked around the raised circular track, turning rollers in the center of the circle. Cut cane was carried through the archway and crushed between the rotating rollers.³⁶

4.2.1.2 The Windmill The windmill, used in post-1750 sugar production, rests on a level man-made earthen platform (Figure 5).

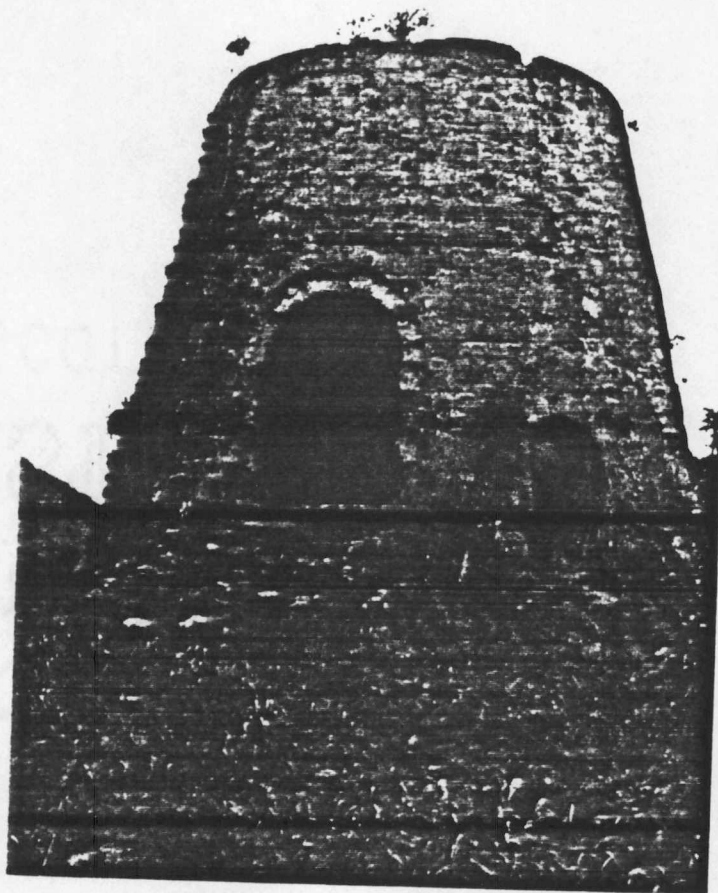


Figure 5. The windmill.

Cane was carried up a ramp to the main entrance and fed through wooden rollers turned by the wind. The juice was then carried on a wooden trough down to the boiling house where it was processed. The only remaining parts of the windmill are a stone platform and two wooden beams embedded into the floor. It is thought that "at one time they formed the base that supported the roller mechanism and the center shaft."³⁷

4.2.2 The Boiling House

The boiling house (Figure 6) is a two-story structure set into the hillside so that the upper floor is at ground level on the upslope side. The long east and west walls run for 72.8 feet, and each has nine arched window openings on the exterior upper level. The gable ends are 27 feet wide.³⁸

4.2.2.1 The Lower Story The lower story of the west wall is penetrated by openings which are part of the controls of the oven and flue system that heated the kettles above (Figure 7). Plantation owners used dried sugar cane stalks, called bagasse, as fuel. This fuel was added to the oven through the openings at the south end of the west wall. The fuel rested on a grate as it burned. The ashes fell through the grate and were removed through a tunnel-like passage that curves up and to the right under the grate to the left of the boiler. A chimney, located in the middle of the boiling house, drew the heat through the flue.³⁹

The fire which heated the kettles was usually enclosed in order to conserve heat, for bagasse burned quickly, and to prevent a chance

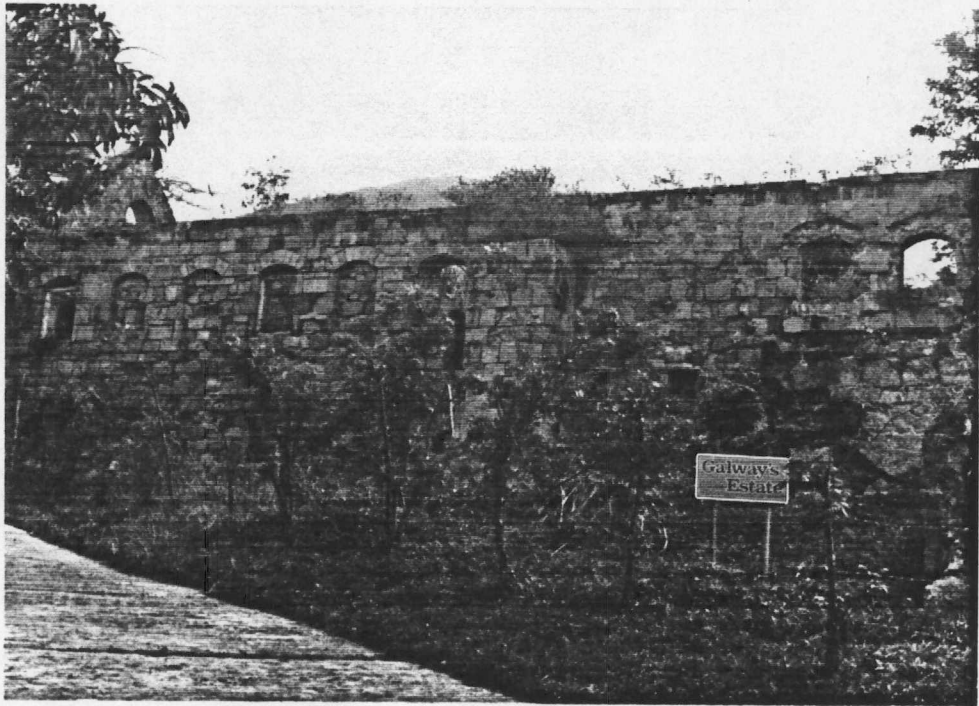


Figure 6. The boiling house.



Figure 7. Outside opening into the oven and flue system.

spread of fire. William Smith of Nevis, who visited Montserrat during boiling season in the early eighteenth century, described the sight of sugar refineries from off shore, at night:

The lights glowed from the fires
underneath the sugar coppers which were
all located along the western sides of the
boiling houses. This arrangement was
necessary to keep the fires on the downwind
side of the easily combustible sheds.⁴⁰

4.2.2.2 The Upper Story A stone interior partition divided the building into two unequally sized rooms. The south room, roughly twice the size of the north room, has a cobbled floor and originally contained five iron kettles mortared into the floor along the west wall over a boiler and flue system. Here the cane juice was boiled, reducing it to a thick syrup. The thick syrup was then cooled to crystalline form in large square wooden vats placed along the interior east wall. Wooden barrels were filled with the sugar crystals, and stored in the smaller north room to cure.

The smaller north room had a wooden rack instead of a floor on which the barrels of sugar were stored. Beneath the rack was a plastered vat, which caught the molasses that drained out of the barrels as the sugar cured. The barrels were stored here until they were needed or sold. The majority of the plantation's sugar was exported to England, while lesser amounts were exported to Holland and Wales.⁴¹

4.2.2.3 The Roof The roof of the boiling house was originally covered with pan tiles made from clay. Pan tiles are "in the form of

an oblong parallelogram...but are bent breadthwise forwards and backwards in the form of an S." Due to the weight of such tiles, substantial framing devices were set up within the boiling house. Large posts were placed on the girts to support the rafters, which in turn supported the roof.⁴²

4.2.3 The Barn/Warehouse Building

The remains of what was probably a barn/warehouse building lie just to the south-east of the retaining wall of the great house. Most of the south wall and portions of the east end of the north wall still stand (Figure 8). The dimensions of the storage building can be inferred from these wall segments. The building would have measured 48 by 83 feet. The shape of the building, and the artifact collection excavated within and around the building suggest its use as a barn and warehouse facility.⁴³

4.2.4 The Cisterns

Three large stone tubs arranged in an irregual stairstep formation form a series of cisterns. The largest of the three cisterns is highest on the slope and closest to the boiling house. It measures 23.9 feet long by 10.6 feet wide and between 6 and 9 feet deep. This cistern has a mortar floor (although some rubble is now present in the base) and a small drain four and one/half feet from the top (Figure 9). The two other cisterns are downhill and smaller, although similar in shape. It is most probable that these cisterns were used to collect rainwater in much the same way neighborhood cisterns are used today in St. Patricks, but the cisterns may also have been used to manufacture rum or indigo instead.⁴⁴

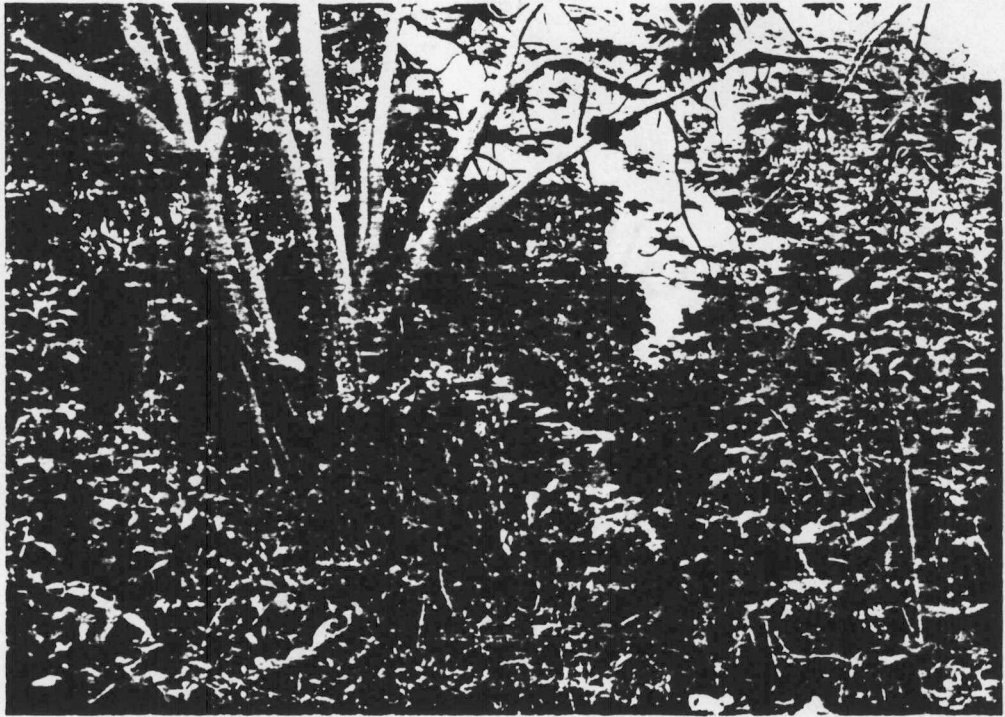


Figure 8. The remaining portion of the north barn/warehouse wall.



Figure 9. The largest cistern.

4.2.5 The Great House

One of the most intriguing structures of the plantation is the great house. In spite of the extreme effects of weathering and heavy vegetation, many of the features of this great house are still evident: paved stone walkways, staircases, building techniques, and a retaining wall.

4.2.5.1 The Walkways Paved stone walkways run along the front (south side), around the east side, and across the back (north side) of the great house. The walkways are composed of facing stones mortared together with a molasses/loam/dung composite (Figure 10).⁴⁵ As mentioned earlier, using paved walkways rather than merely treading a path in the land would have minimized erosion. It seems just as logical though, to assume the paved walkways were laid out partly for aesthetic reasons, as they occur only around the great house.

4.2.5.2 The Staircases Looking at the great house from the south side, one sees a root-bound pile of mortared stones which are the remains of the grand central staircase (Figure 11). In addition to this staircase, a smaller run of four steps (approximately three and one-half feet wide by one and one-fourth feet deep) connecting the east walkway with the great house. In spite of the heavy vegetation and crumbling mortar, the stairs are clearly discernible (Figure 12).

4.2.5.3 The North Face, or Back Wall The north face wall, or back side of the great house, offers the best example of stonework in

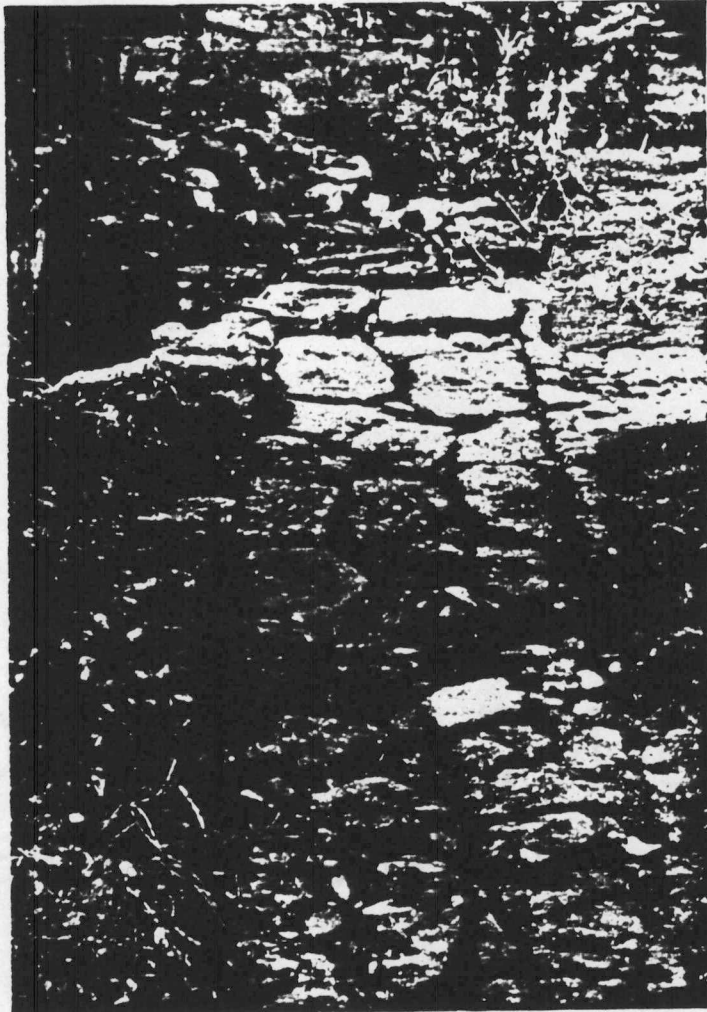


Figure 10. A paved walkway.



Figure 11. The remains of the grand central staircase.



Figure 12. The remains of the east side stairs.

the great house (Figure 13). Upper and lower story windows can be identified through the hanging vegetation, as well as the symmetrical, orderly placement of facing stones comprising the wall. Extending from this wall eastward is a much more severely weathered wall section. In spite of heavy weathering, this wall section illustrates the various methods of construction used on the plantation (Figure 14). The lower level of the wall is formed with large stones haphazardly mortared together with a molasses/loam/dung composition. On top of this layer is a mixed section of rubble and mortar. Rubble was often used to fill the interstice between two rows of facing stones in a wall.⁴⁶ In this example, the rubble has been used to extend the height of the wall with minimal effort. The rubble is secured by the incorporated mortar and the top layer of the wall. A row of large facing stones caps the rubble and tops the wall.

4.2.5.4 The Retaining Wall Downslope, to the east of the great house, is a massive U-shaped retaining wall (Figure 15). With a consistent top width of three feet and a maximum height of seven feet, it is a formidable structure that must have had a function beyond that of providing privacy. A number of features of this structure have led to the conclusion that it is a reservoir.

Built into the retaining wall at its southwest corner is an effective drain system that would have allowed water to run out of the enclosed area and into a facing stone drain braced with iron



Figure 13. The north face wall of the great house.

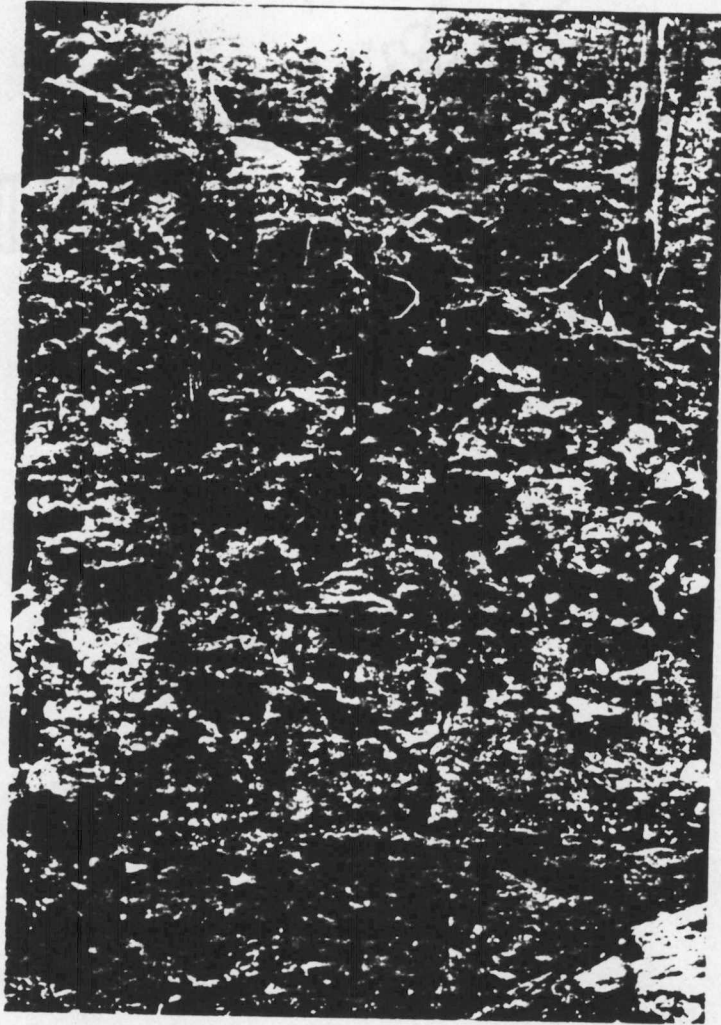


Figure 14. The east wall section, illustrating construction methods.

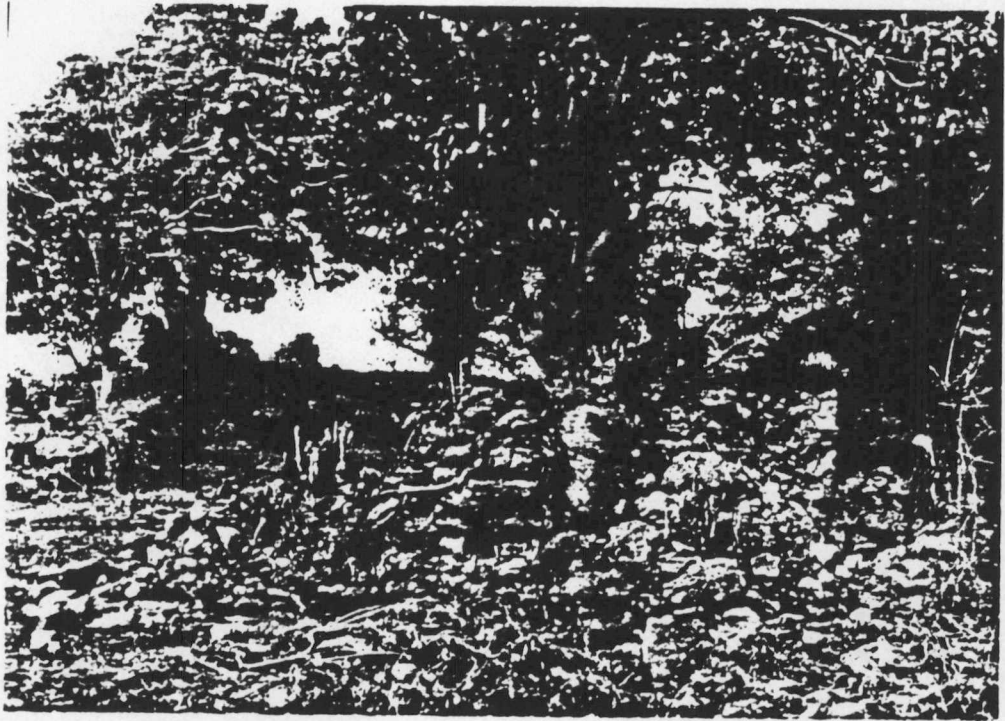


Figure 15. The retaining wall.

clamps (Figures 16 and 17). In addition, low stone buttresses occur approximately every six feet along the outer west wall, suggesting that the wall required reinforcement to withstand water pressure. (Figure 18).⁴⁷

5. SUMMATION AND CONCLUSION

By looking at the geography, economy, and history of Montserrat—and in particular, Galways plantation—one gains insight into the deepest and oldest lifeways and cultural influences of Montserrations, and West Indians in general. The "oldie days," as the past is affectionately called by elder Montserrations, is vividly alive in their memories and an integral part of their sense of self. To attempt an understanding of any twentieth century West Indian people without searching for the long and varied roads which have brought them to and shaped their present lifeways is to miss the richness of a culture and to do injustice to that people. It is hoped that this report has afforded the reader a deeper understanding of Montserrat's history and early lifeways, and thereby brought a heightened respect for the West Indian people and their culture.

NOTES

¹Lydia M. Pulsipher, Earthwatch Briefing: Galways Plantation—1982 (Belmont, Massachusetts: Earthwatch, 1983), p. 19.



Figure 16. The retaining wall drain.



Figure 17. The retaining wall drain system.



Figure 18. The exterior stone buttresses supporting the retaining wall.

²Ibid.

³Ibid.

⁴Lydia M. Pulsipher, Galways Plantation 1981 Field Report (Knoxville, Tenn.: Univ. of Tenn., Dept. of Geography, 1982), p. 29.

⁵Lydia M. Pulsipher, Earthwatch Briefing: Galways Plantation--1981 (Belmont, Massachusetts: Earthwatch, 1982), p. 28.

⁶Pulsipher, Earthwatch Briefing: Galways Plantation--1982, p. 5.

⁷Pulsipher, Earthwatch Briefing: Galways Plantation--1981, p. 32.

⁸Ibid.

⁹Pulsipher, Earthwatch Briefing: Galways Plantation--1982, p. 4.

¹⁰Lydia M. Pulsipher, "English, Irish and African Influences on the Landscape of Seventeenth Century Montserrat in the West Indies," Proceedings of the Middle States Division, Association of American Geographers, Vol. 13 (1979), p. 6.

¹¹Pulsipher, Earthwatch Briefing: Galways Plantation--1981, p. 48.

¹²Ibid., p. 53.

¹³Pulsipher, Galways Plantation 1981 Field Report, p. 5.

¹⁴Ibid.

¹⁵Ibid., p. 6.

¹⁶Pulsipher, "English, Irish and African Influences on the Landscape of Seventeenth Century Montserrat in the West Indies," p. 5.

¹⁷Pulsipher, Earthwatch Briefing: Galways Plantation--1981, p. 45.

¹⁸*Ibid.*, p. 44.

¹⁹*Ibid.*, p. 46.

²⁰*Ibid.*, p. 47.

²¹Lydia M. Pulsipher and Conrad M. Goodwin, "Galways: An Irish Sugar Plantation in Montserrat, West Indies," Post Medieval Archaeology, Vol. 16 (1982), p. 6.

²²*Ibid.*

²³*Ibid.*

²⁴*Ibid.*

²⁵*Ibid.*, p. 7.

²⁶*Ibid.*

²⁷*Ibid.*, p. 8.

²⁸Pulsipher, Galways Plantation 1981 Field Report, p. 10.

²⁹Pulsipher and Goodwin, "Galways: An Irish Sugar Plantation in Montserrat, West Indies," p. 6.

³⁰Pulsipher, Galways Plantation 1981 Field Report, p. 29.

³¹Pulsipher and Goodwin, "Galways: An Irish Sugar Plantation in Montserrat, West Indies," p. 5.

³²Lydia M. Pulsipher, "Discovering Water Management Strategies on an Eighteenth-Century Caribbean Sugar Plantation," Context, Winter, 1984, p. 6.

³³Pulsipher, Galways Plantation 1981 Field Report, p. 31.

³⁴Ibid.

³⁵Pulsipher, "Discovering Water Management Strategies on an Eighteenth-Century Caribbean Sugar Plantation," p. 6.

³⁶Pulsipher, Galways Plantation 1981 Field Report, p. 69.

³⁷Pulsipher, Galways Plantation 1981 Field Report, p. 65.

³⁸Ibid., p. 41.

³⁹Ibid., p. 53.

⁴⁰Ibid., p. 55.

⁴¹Pulsipher and Goodwin, "Galways: An Irish Sugar Plantation in Montserrat, West Indies," p. 23.

⁴²Pulsipher, Galways Plantation 1981 Field Report, p. 57.

⁴³Ibid., p. 61.

⁴⁴Lydia M. Pulsipher. Oral interview. October, 1986.

⁴⁵Ibid.

⁴⁶Ibid.

B. THE GALWAYS PLANTATION, MONTSERRAT,
AS WRITTEN FOR A WEST INDIAN AUDIENCE

The Beginnings of Sugar Plantations
on Montserrat

In the Eastern Caribbean chain of islands, some 27 miles from Antigua, is a small but beautifully lush and mountainous island. This island, illustrated in Figure 1, is Montserrat. Christopher Columbus was the first European to see Montserrat. His ship sailed by the island on Sunday, November 10, 1493. At this time, Carib Indians and perhaps Arawaks were the only people living on Montserrat, but this would soon change.

English Settlers

Montserrat was first settled in 1632 by a group of English planters who came from St. Kitts to farm the land. These planters took over the island from the Indians and began to grow cotton, indigo, and tobacco. They formed the small upper class of Montserrat in the 1600's and held positions in Montserrat's government, making and enforcing the laws.

The plantations were built on what the English thought was the best land on Montserrat. They settled along the western coast between what is now Kinsale and Little Bay far to the north. Some also

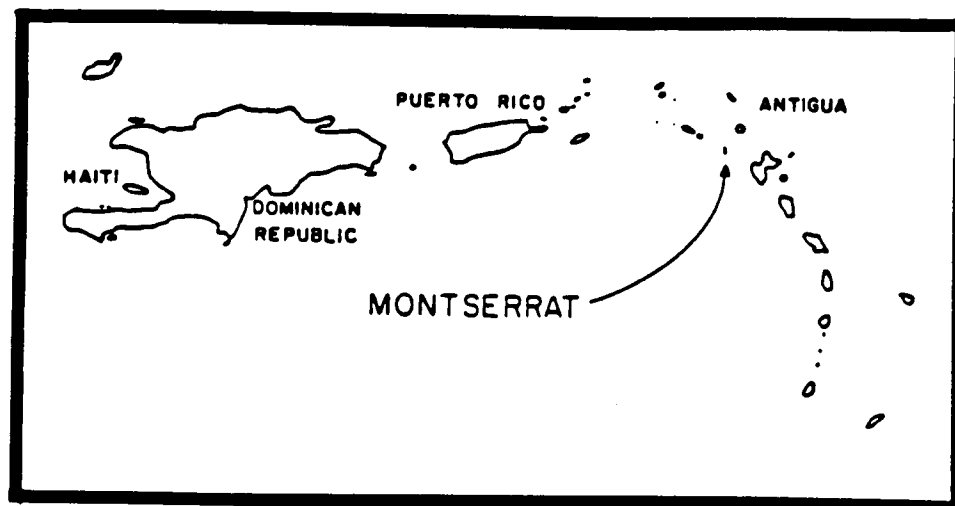


Figure 1. The island of Montserrat in the West Indies.

started plantations in the valley between the Centre Hills and Soufriere Hills. These areas had the best soil and, unlike the eastern coast and lower elevations, received much rainfall. Some of these early planters were John Davies, William Carr, John Symes, Anthony Briskett, Roger Osborne, and William Stapleton.

Irish Settlers

When the English planters came from St. Kitts, they brought Irish indentured servants with them. The Irish wanted to leave Ireland to find a better life in the New World, but they didn't have enough money to pay their travel expenses. An English planter would pay an Irishman's travel fare, and, in return, the Irishman would work on the Englishman's plantation. They would agree upon the number of years the Irishman had to work for the Englishman, and when those years were over, the Irishman was supposed to get his own plot of land.

Since the English planters were already settled on the best land, the land left for the Irish was much harder to farm. The Irish settled on the stoney, dry land of southwestern Montserrat between Kinsale and O'Garros. In 1677, there were over 2000 Irish in Montserrat and over half of them lived in the St. Patricks area. Because the soil in St. Patricks is so hard and dry, very few Irish planters could make a living. As a result, many of the Irish left beginning around 1700. Many went to North America.

David Galway wasn't like most of the other Irish in Montserrat. He didn't come to Montserrat as an indentured servant. Although we don't know for sure, David Galway must have been quite well off. By 1660, he owned a plantation somewhere in St. Patricks. By 1730, Galways plantation was where Upper Galways is today. Spreading over 1300 acres, it was larger than any of the English plantations on the island. Galway differed from the English planters in another way, too. While most English plantations were located on the gentle, western slopes of Montserrat, Galway built his plantation on the steep slopes below Galways Soufriere in St. Patricks. Galways plantation was successful partly because it was in a place where light showers fell several times a day during much of the year, and partly because the mould was very rich. For these reasons, and also because the planter did not have to pay the Irish servants to work, Galways became a successful and profitable sugar plantation.

African Slaves

Enslaved Africans were first brought to Montserrat around 1650 after sugar production began to be an important business on the island. At first, the Africans worked with the Irish indentured servants, but by the early 1700's, so many Irish had left Montserrat, and so many slaves had been brought to Montserrat, that the slaves outnumbered white settlers five to one.

The slaves soon tired of plantation life. They were forced to work long, hard hours and received little in return. As a result,

they began to create many problems for the planters. They cut cane to feed to their animals instead of letting it grow big, they set fields on fire, and they ran away. In 1768, a group of slaves planned to attack Government House on St. Patrick's Day. Government leaders found out about the plot though, and the slave leaders were killed. The plotted attack is now known as the St. Patrick's Day Rebellion.

At this time, many people in England disagreed about whether or not slavery should be lawful. In 1807, a law was passed which was a compromise between pro-slavery and anti-slavery groups. The law stated that Africans could no longer be taken from their homeland and enslaved, but that slaves which were already on plantations would not be freed. A further ruling, however, on August 1, 1834, freed all the slaves in British colonies. The plantations had already lost their Irish indentured servants. Now, with the slaves freed, the plantations lost almost all of their remaining workers. Added to the problem of a labor shortage, new sugar plantations were being established in Cuba and Brazil. These big, mechanized plantations took away much of Montserrat's sugar market. In addition, Europeans began making sugar from the sugar beet instead of buying sugar made from sugar cane. These problems and developments decreased Montserrat's sugar sales and the plantations began to dwindle. By the 1860's, Montserrat's sugar industry died out, and planters began growing two new crops--limes and cotton.

Galways Plantation in Its Prime

Daily Life on the Plantation

Daily life on the Galways plantation must have kept many people very busy. Growing sugar cane and processing sugar was the main activity on the plantation. In order to keep sugar production going, many other activities were required.

Building

Before any sugar production could begin, several buildings had to be built. The slaves and indentured servants cut stones and built the great house, where the plantation owner and his family lived. Around the great house, they built a large retaining wall and several stone walkways. They also built their own houses out of stone and wood, and thatched the roofs with palm fronds, like the one in Figure 2.

In addition to building places to live, the slaves and indentured servants built the structures needed for processing the sugar cane. A cattlemill, windmill, boiling house, and barn/warehouse were constructed out of stone. Figure 3 shows the general area where buildings were located on the plantation. Some of the surrounding land was planted with sugar cane, but some other land was used for growing vegetables, grazing the cattle, horses, and donkeys, or left alone for use later.

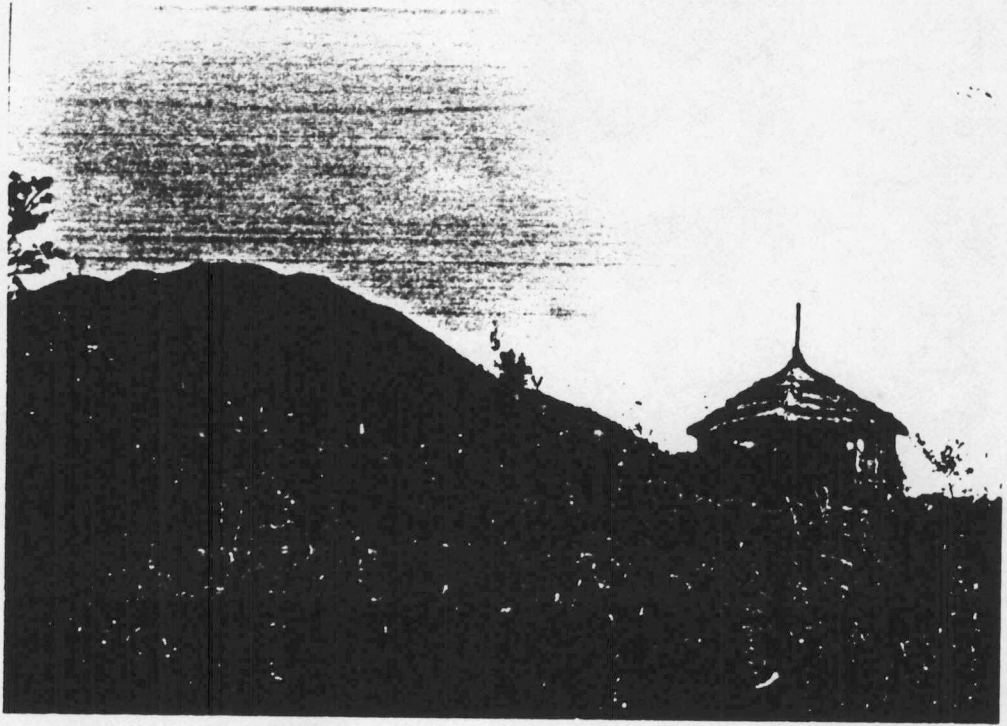


Figure 2. A house in Montserrat with a thatched roof. Roofs like this one were made for the workers' houses on Galways plantation.

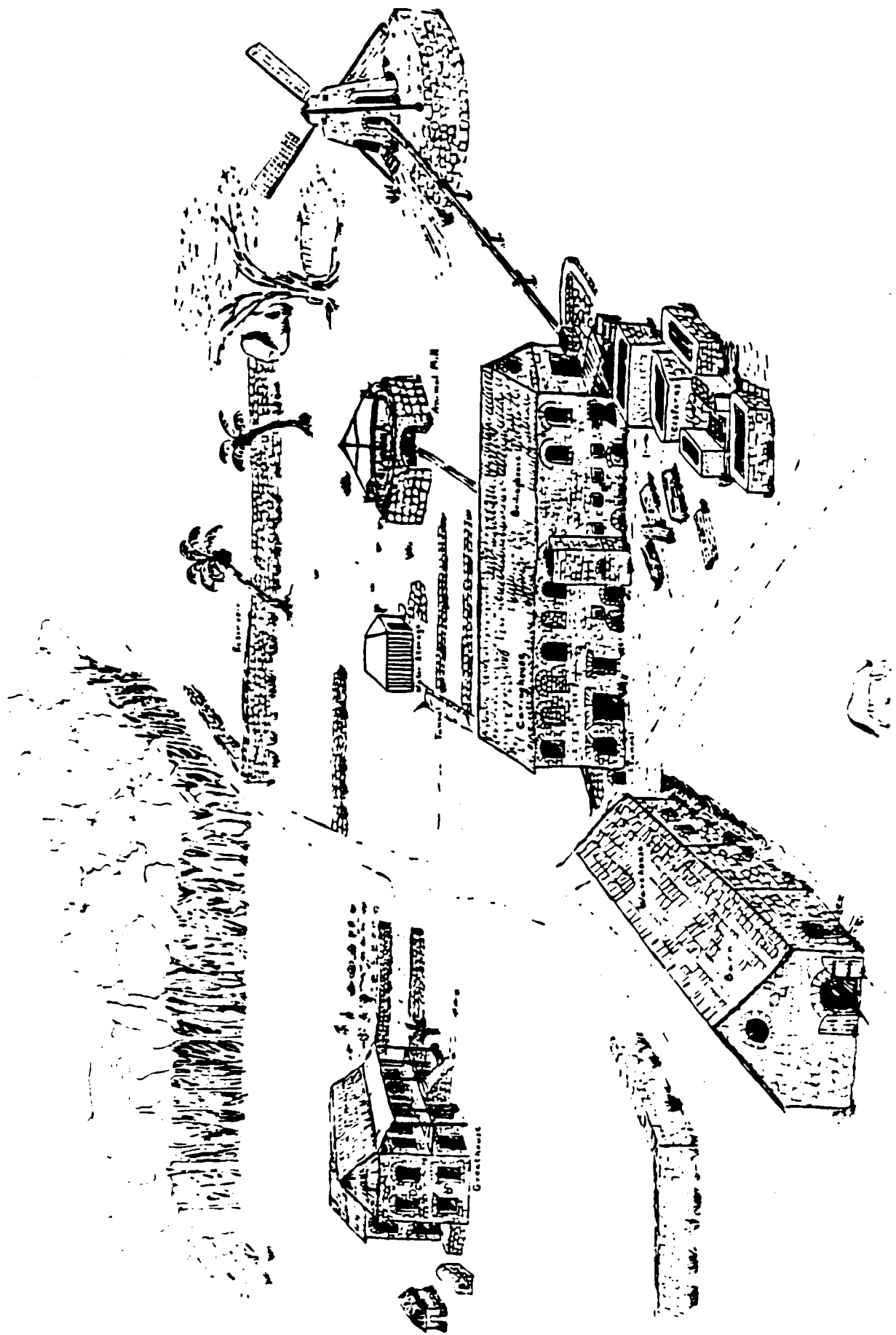


Figure 3. How Galways plantation probably looked in 1730.

Gardening

Like most West Indians today, the people living on Galways plantation grew much of their own food. A portion of the land near each house was used as a garden. Here, they grew fruits and vegetables much like the ones grown today. Pineapples, beans, manioc, dasheen, sweet potatoes, cocoa, coffee, mangoes, and bananas were commonly grow foods.

The early settlers also raised goats and chickens for food. They sometimes hunted and ate iguanas and the large, wild frogs known today as mountain chickens.

In addition to providing food, some plants--like the calabash and palm trees--were used to make things. The calabash tree bears a large round gourd which, when hollowed out and dried, makes a sturdy water jug. If the calabash is cut before it dries, bowls, cups, and spoons can be made. The fronds of the palm tree were used to make thatched roofs on the houses of the slaves and indentured servants.

Other plant parts also had common uses. The large leaves of the cheney bush were often used to wrap up food in much the same way aluminum foil is used today. Ducknow--a recipe made with grated sweet potatoes, coconut, flour, sugar and hot pepper--was often wrapped in a cheney bush leaf and then tied with a banana string before boiling. Figure 4 shows some ducknow wrapped in aluminim foil, and some wrapped in cheney bush leaves, after boiling.

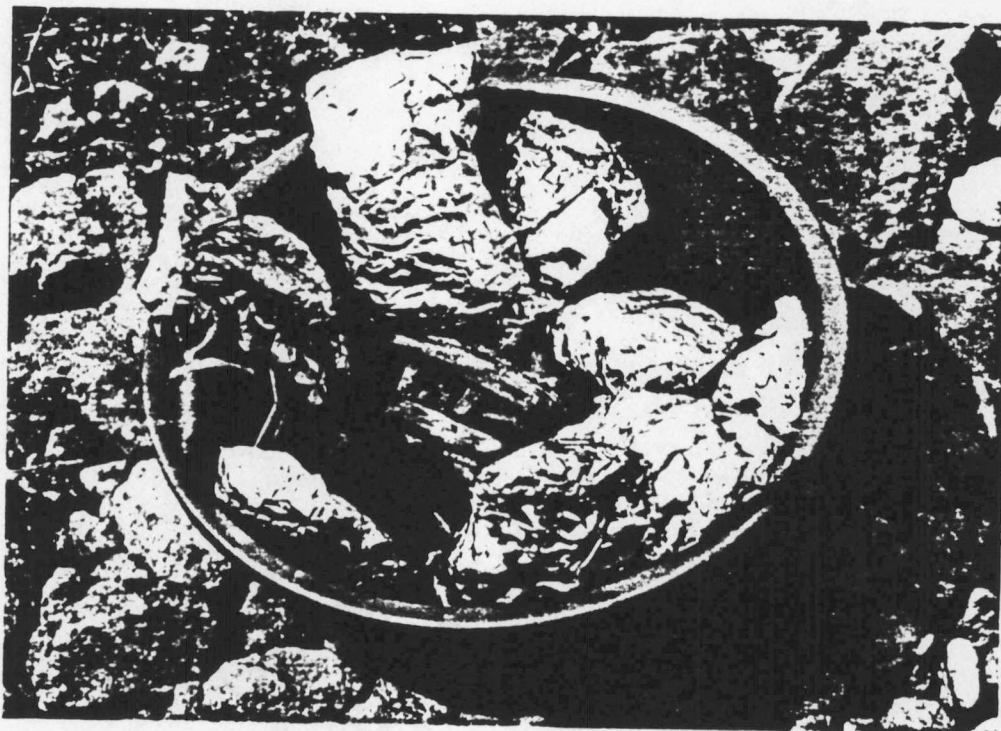


Figure 4. Ducknow, some wrapped in aluminum foil and some in cheney bush leaves.

Collecting Water

Without a nearby spring to give water, the Galways settlers came up with other ways of getting water. Since rain fell frequently on the plantation, the slaves and indentured servants built several cisterns which would catch and hold the rain that fell. Figure 5 shows one of these cisterns. It is very similar to the cistern in Figure 6, one used in St. Patricks today.

The settlers also used waterstones to collect rainwater. A large stone was ground down so that it had a slight curve in the shape of a V in the middle. The stone was leaned against a steep slope and a stone trough was placed at the bottom. As rain fell, some fell on the stone and was guided down and into the trough. Soon, the trough would be full of fresh rainwater.

Sugar Production on the Plantation

The first step in producing sugar at Galways was deciding where to plant the sugar cane. Sugar cane needs lots of room to grow, and so the fields must be very large ones. Galways plantation had many large fields, but all of the fields wouldn't be used at the same time. Some fields would be left empty--or fallow--for a while. This practice lets the field rest, get back some of its minerals, and become rich again. Once the fields were chosen, the mould would be loosened and turned over with a pick axe. With the soil loosened and turned, the sugar cane could grow.

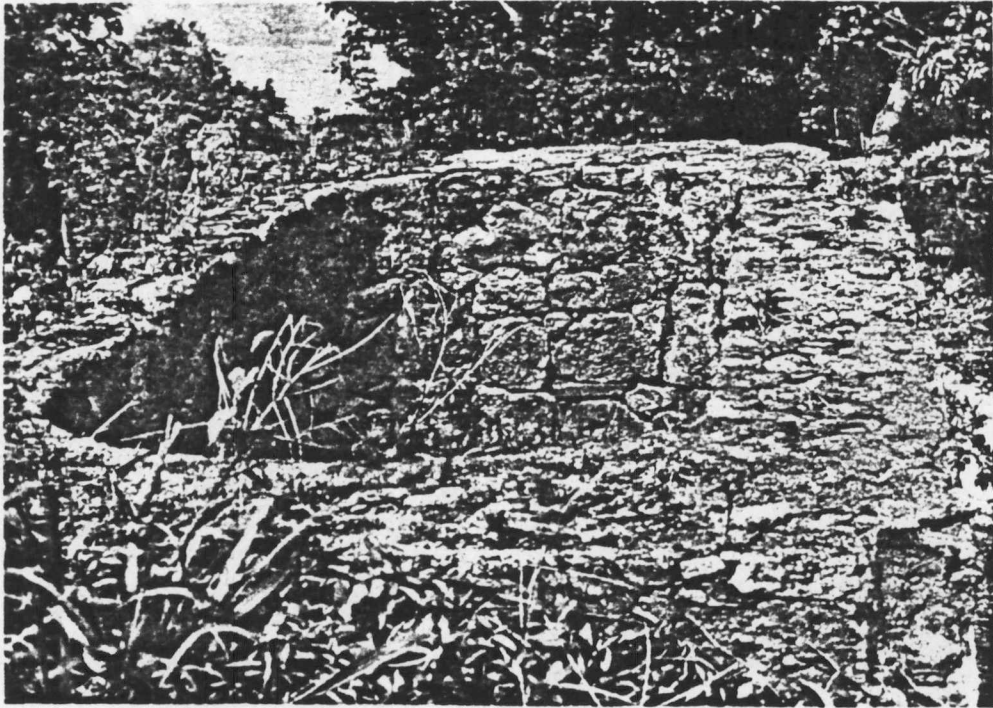


Figure 5. The largest cistern on the Galways plantation. Look at how similar the shape is to the one in Figure 6.

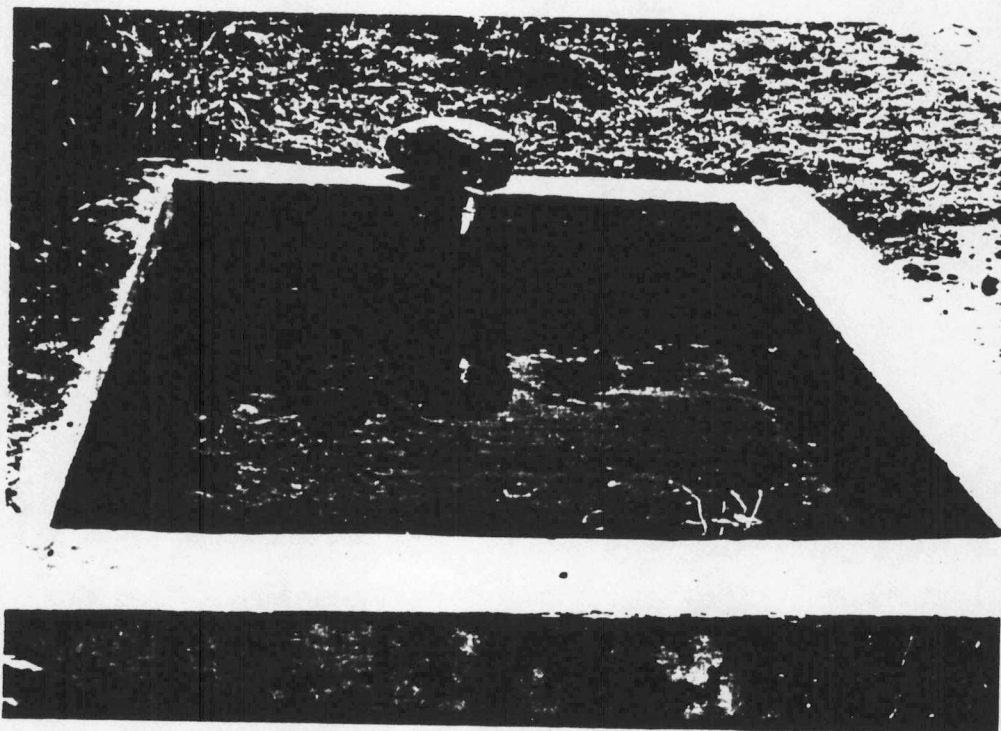


Figure 6. A cistern in St. Patrick's today.

There are two ways of getting cane to grow in a field. If the roots from the last crop of sugar cane were still in the field, the plantation owner could decide just to let new shoots sprout right from the old roots. These new shoots from old roots are known as new cane, or ratoons. If the plantation owner didn't want to use the old roots to get the new cane, he would have the slaves plant setts in the field. Setts are pieces of cane planted in the ground which will sprout new shoots and grow. This method of planting is similar to planting with cuttings (as shown in Figure 7), the way West Indians plant dasheen and other vegetables today.

Today's sugar cane planters put sulphate of ammonia—or "salt"—on the soil. The "salt" acts as a fertilizer, helping the cane to grow. The slaves in charge of tending the Galways cane crop didn't have "salt" to use as a fertilizer. Instead, they collected manure from the plantation animals in baskets. The slaves carried the baskets through the fields, spreading the manure by hand. After two or three months of good weather, the full-grown cane would look very much like a field of tall grass. The cane would be very tall, with big, fat stems, and hairy arrows on top of each stalk. These hairy arrows are the flowers of the sugar cane plant and are called cane arrows. After the cane flowers appeared, the cane could be harvested.

The young, strong male and female slaves and indentured servants would go out into the fields with their cutlasses to harvest the cane. Often, they would burn the field to get rid of the thick

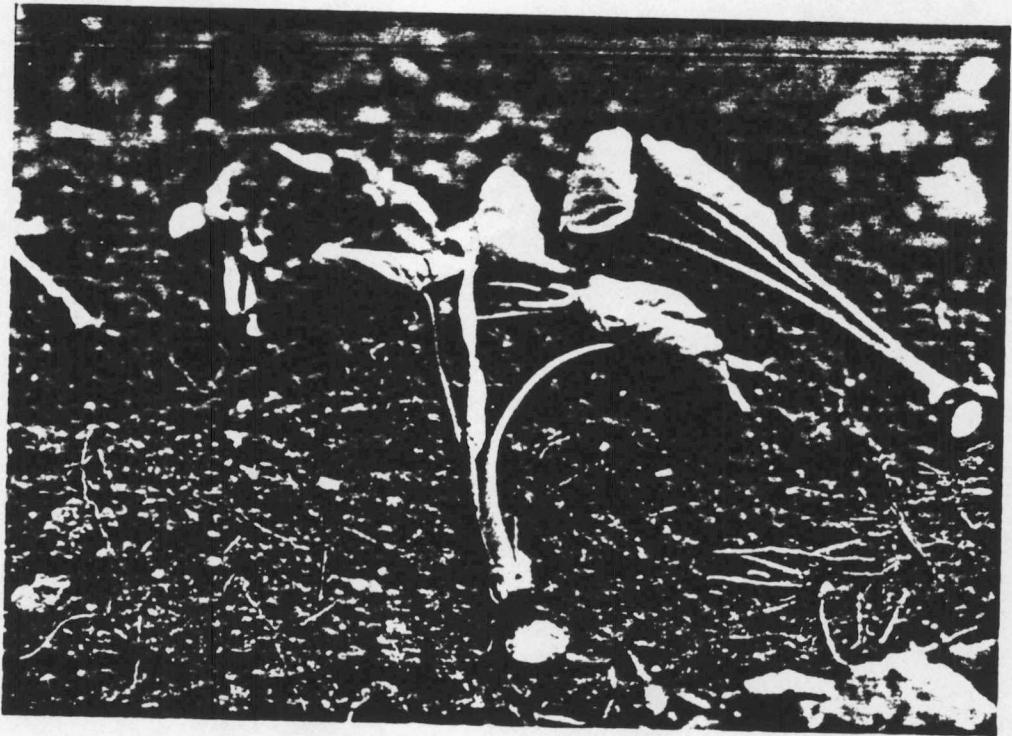


Figure 7. Dasheen cuttings ready to be planted.

undergrowth and leaves around the stems. Once cut, the cane stalks would be carried to the mills. The stalks would either be loaded onto the backs of donkeys, or the slaves would carry the large bundles of cane by hand to the mills.

Today, machines with rows of large knives cut up the stalks of cane and then other machines with big rollers crush the cut cane stalks. On the Galways plantation, the cane stalks were not cut up, but were immediately pushed by hand through the rollers in the mills.

If the wind was blowing strongly, the workers would use the windmill (see Figure 8). If there wasn't enough wind, they would use the cattlemill. Both mills worked the same way, whether the rollers were turned by the wind or by cows. When the windmill blades turned, they caused the large rollers at the bottom of the windmill to turn. In the cattlemill, the animals were yoked to sweeps connected to a center post in the mill. As the animals walked around the mill circle, they caused the rollers in the center of the circle to turn. Slaves would push the cane between the turning rollers, and the rollers would squeeze the juice out of the stalks. The juice would run into a trough and down to the boiling house.

Once at the boiling house (see Figure 9), the juice first was held in a "clarifying" vat while the impurities settled out. Then it flowed into the largest of the five iron kettles, or coppers, along the boiling house wall. The coppers sat over a boiler and flue system. Dried cane trash, called bagasse, was used as fuel. The bagasse was added to the oven through the outside openings in the

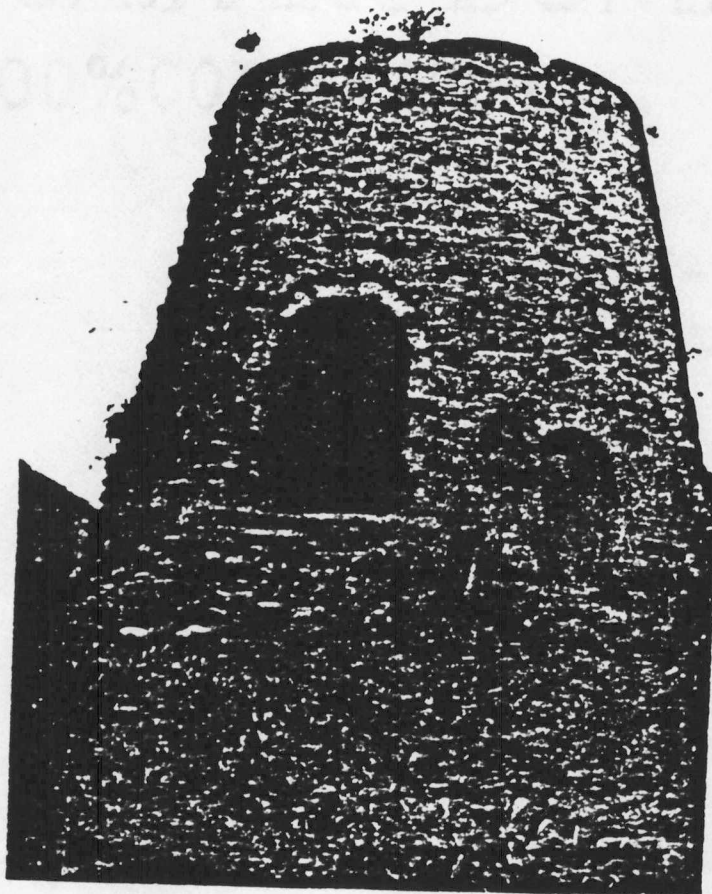


Figure 8. The Galways plantation windmill.

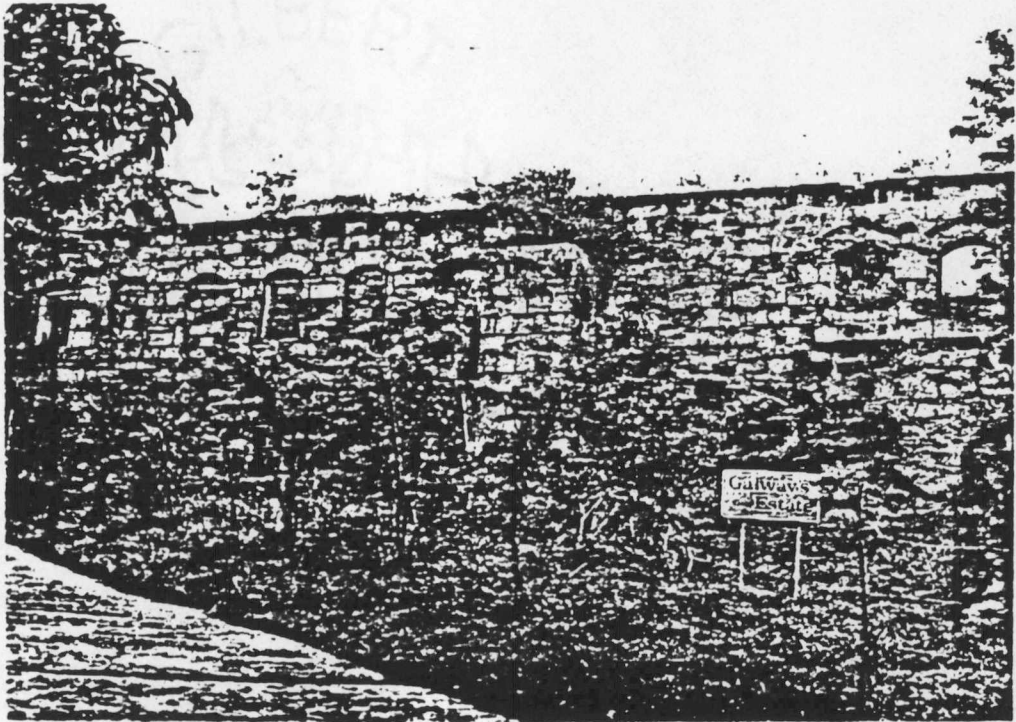


Figure 9. The Galways plantation boiling house.

boiling house wall. You can see these openings in Figure 10. The bagasse rested on a grate as it burned. The ashes fell through the grate and were removed through a tunnel-like passage. This passage curves up and to the right under the grate. A chimney in the middle of the boiling house drew heat through the flue and under the kettles. The cane juice would heat up and begin to boil.

Boiling the cane juice caused the water in the juice to evaporate, producing a thick syrup. The syrup was poured into large square wooden vats along another wall of the boiling house. As the syrup cooled in these vats, it turned into crystals, or small grains of sugar. The sugar crystals were poured into wooden barrels and moved into the curing room in the upper story of the boiling house. The barrels of sugar were stored here while uncrystalized sugar and impurities—together known as molasses—drained out of holes in the barrel and into a large plastered vat below on the first story. Eventually, the sugar was packed into shipping barrels and sent by ship to England where it was processed further to make fine, light-colored crystals that brought a high price on the European market.

With the work of harvesting, processing, and sales over, the plantation family, indentured servants, and slaves would have had much to celebrate. Plantation owners and workers throughout the Caribbean today feel much the same way, and so each crop-producing island has its own Cropover celebration.

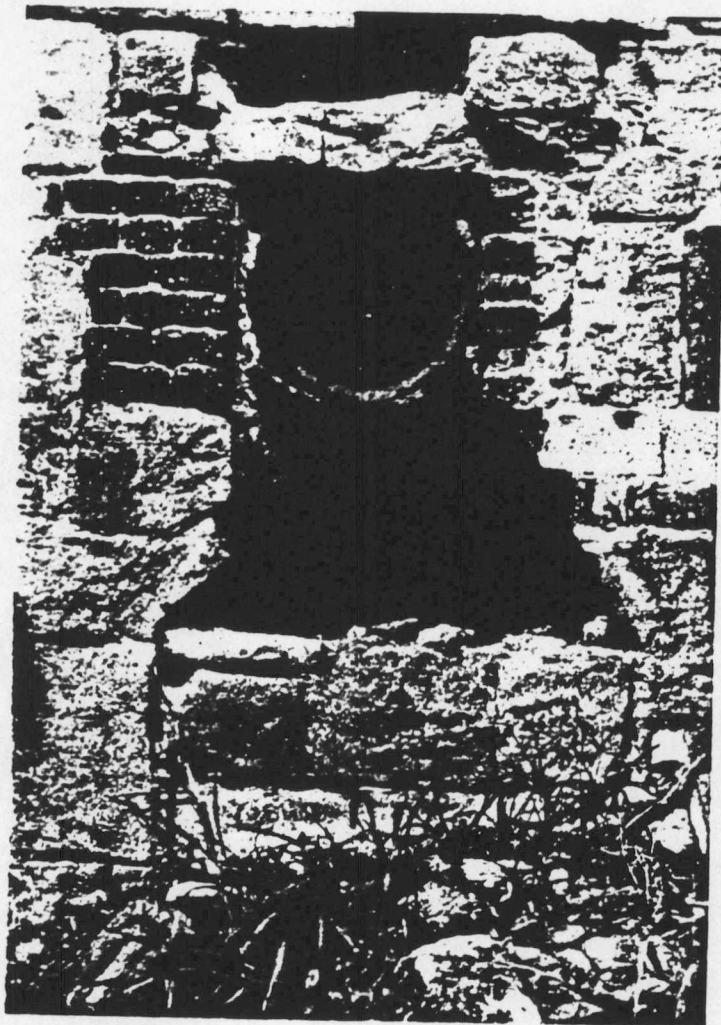


Figure 10: Outside openings into the flue system of the boiling house.

Galways Plantation Today

Sugar processing and Cropover celebrations may not go on today at Galways, but there is much activity on the plantation. The Montserrat National Trust has sponsored much of this activity, and many Montserradians and members of yearly summer field schools have become interested and active workers at the plantation. Instead of producing sugar, these volunteer workers carry out plantation preservation activities.

The Montserrat National Trust

The Montserrat National Trust was formed in the 1970's to promote historical preservation and to conserve Montserrat's natural resources, like the land, water, forest, and wild animals. The Trust is also interested in preserving places, and things, which are a part of Montserrat's cultural past.

In 1976, the Trust turned an old abandoned plantation windmill into the Montserrat Museum. The Museum displays all kinds of things related to Montserrat's history. There are artifacts like Amerindian figurines, and pieces of English and Irish tobacco pipes. Old grinding stones, assorted shells from Montserrat's beaches, and old photographs are also displayed, all with explanations to help the visitor understand.

One of the Trust's biggest projects is the study of Galways plantation. When the study is complete, the Trust hopes to turn the

plantation ruins into an outdoor museum where Montserratians and their visitors can come and see what a plantation was like.

Summer Field Schools

Each summer, groups of volunteers come to Montserrat to participate in a field school at Galways. Earthwatch Expeditions has organized eight teams of field workers. The University of Tennessee has also organized summer field schools at Galways. The workers in both the Earthwatch and University of Tennessee field schools were college students and adults who came from all over the United States to work at Galways for three weeks. Any interested Montserratians are also invited to help out at the site. Here, the students and volunteer Montserratians join with the hired workers and archaeologists to work at the plantation.

The hired staff, field school workers, and volunteers from Montserrat are interested in finding out how people lived and worked on Galways plantation. In order to find this out, they clear away heavy vegetation from buildings, and dig dirt away from buried structures. The workers don't just clear or dig anywhere though. They must go about their research in a very organized way.

The first step is to divide the study area, or site, into five foot squares called grid squares. The workers use tape measures to determine the correct distances. They measure the distances starting at a specific place. This specific place is called the datum point. If grid squares are ever laid out again at a site, they will be

measured starting from this same datum point. This practice insures that the measurements will be accurate and that the squares will fall in the same place each time. After a five foot square has been measured, the workers tie a bright red piece of plastic to a stake, and put a stake in the ground at each of the four corners of the square. Some of the field workers are measuring squares in Figure 11.

When the squares are all measured and marked with stakes, the archaeologist draws a map showing how the squares are laid out. Then, the archaeologist gives each square a number, and writes that same number on the outside of a small plastic bag. Laying out the grid squares and drawing a map of where they are is the most important step the workers due. This step makes it possible for the archaeologist to know exactly where a particular artifact came from, even when it is taken away from the site. The grid squares are also important because they place the artifacts in a context. The archaeologist can often figure out how an artifact was used by its owners from where it is located on the site.

The Surface Collection

Each worker is assigned a square in which to do a surface collection. When someone does a surface collection, they look over that square very carefully. Figure 12 shows Beth, a summer field worker, busy looking over her square. If Beth finds any artifacts (man-made things, like broken pieces of pottery or glass), she picks them up and puts them in the plastic bag. After looking over the surface of the square, Beth turns over the top 1/2 inch of soil with



Figure 11: Summer field school workers measure squares in the field.

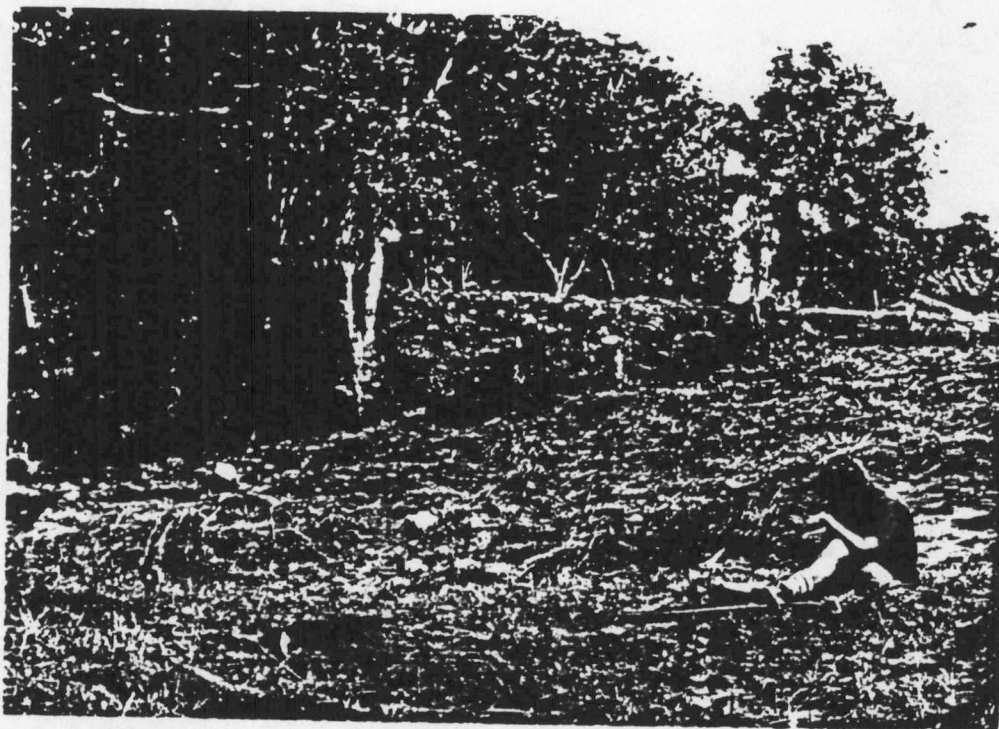


Figure 12: Beth looks carefully for artifacts in a square.

trowel. Again, she carefully remove any artifacts and puts them in the plastic bag. Figure 13 shows several artifacts uncovered in a square—a piece of roofing tile and a piece of pottery.

When looking over the field, the workers sometimes find a large stone with flat sides or a flat top. These flat stones are called facing stones and were often used to build walkways, walls, and sets of stairs. If the archaeologist thinks the stone could be part of a large structure, he has the workers uncover the stone. In Figure 14, Doug has uncovered a large walkway beneath the dirt in front of the great house. Figures 15 and 16 show three Montserrations at work, and what a wall of faced stones soon led them to—a set of stairs leading into the great house.

Cleaning the Artifacts

When the surface collection of a square has been finished, the bag of artifacts is emptied into a pan of water. The worker lightly brushes each article with a soft toothbrush in the water. This removes the dirt and bits of plants from the artifact. Several workers are busy cleaning artifacts in Figure 17.

As each artifact is cleaned, it is placed in a screen tray like the one in Figure 18. When all of the artifacts from the bag have been cleaned and placed in the tray, the tray is set out in the sun so the artifacts can dry. If any of the artifacts have broken apart, the matching pieces are glued back together very carefully.

Cataloging the Artifacts

Cataloging artifacts is the way archaeologists organize what they find at a site. When the cleaned artifacts have dried, a small



Figure 13: A piece of roofing tile and a piece of pottery found in one of the field squares.



Figure 14: Doug uncovers a large walkway of paved stones.

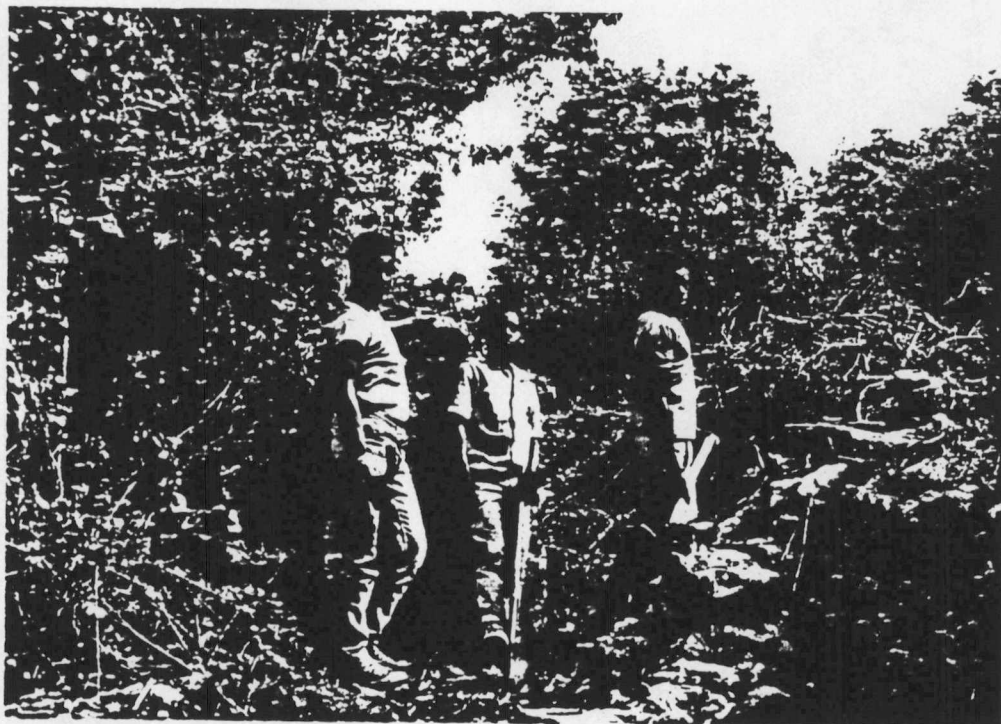


Figure 15: Three Montserratians ready to work.

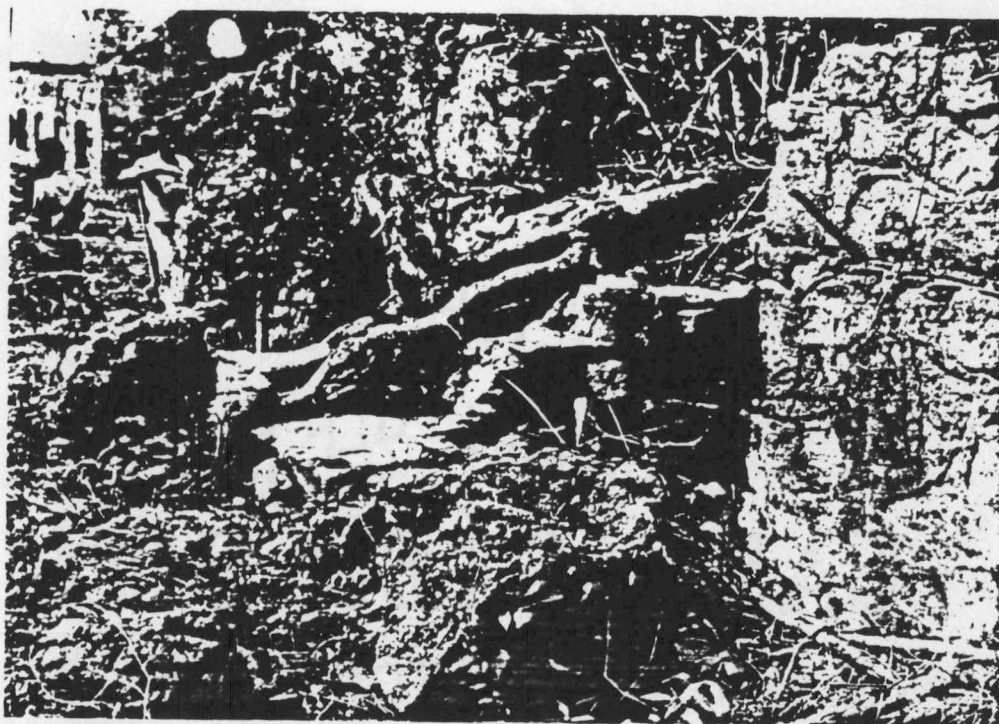


Figure 16: The set of stairs which the young men found behind the dirt and vegetation.

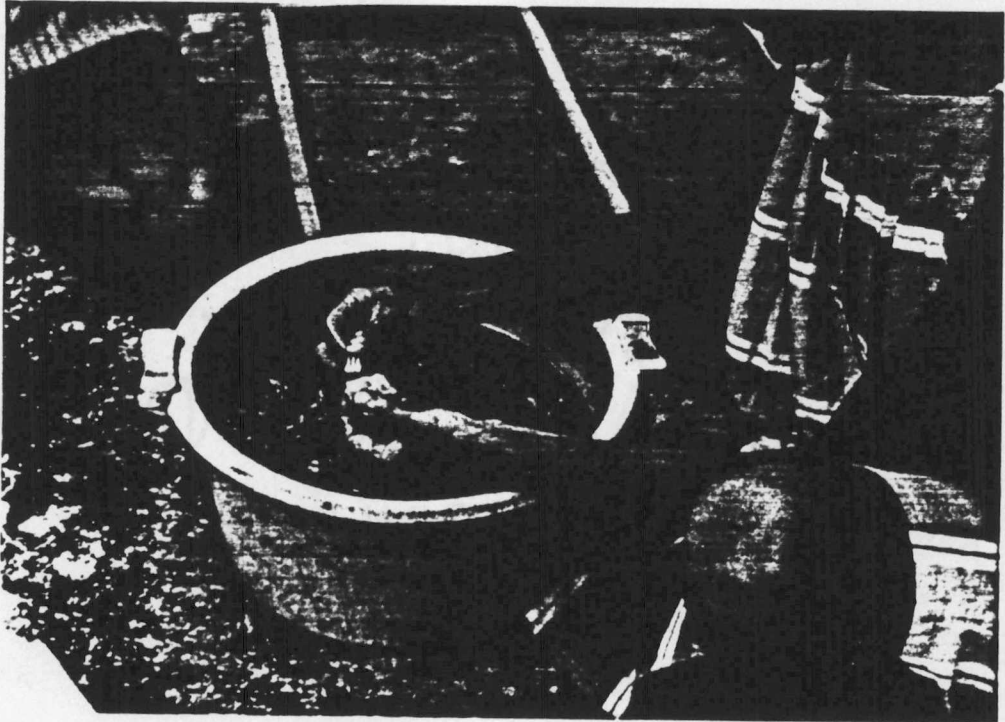


Figure 17: A field school worker cleans an artifact with a soft toothbrush in a pan of water.

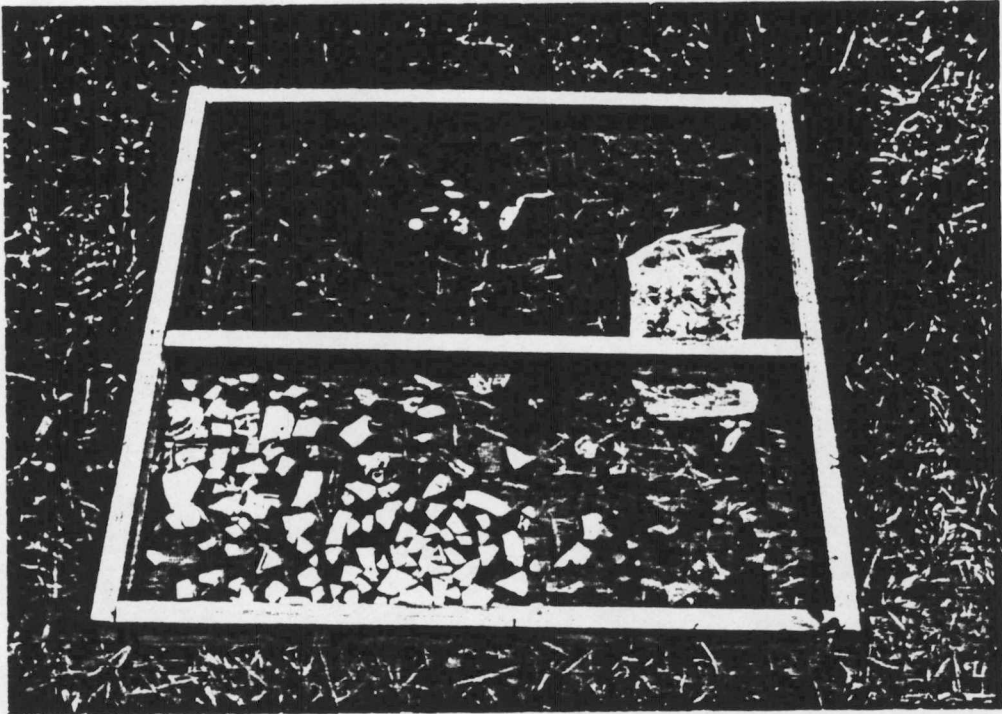


Figure 18: A filled tray of cleaned artifacts is set in the sun to dry.

sticker with a number on it is glued to the back of the artifact. The archaeologist writes the number of the artifact and a description of it in a notebook. From these descriptions and from where the artifact was found, archaeologists can figure out how an artifact was used and where it was made. The artifacts are then stored in large shallow drawers. By numbering and cataloging the artifacts, archaeologists can easily locate an artifact if they need to see it later.

Keeping the Past Alive

You don't have to be an archaeologist to be interested in the past. The Galways plantation summer field school on Montserrat proves that. Anyone who is interested can join with the students and staff to find artifacts, uncover walkways, and discover all kinds of things about how sugar plantations worked in the past. Check with the government Tourist Department to see if there is a similar program on your island. Even if it's not summer in Montserrat, or there isn't a project like Galways where you live, there are still ways to learn about your culture. Spend an afternoon at a local museum, like the Montserrat Museum, or ask your city or school librarian to suggest some books about the West Indies which might be interesting to read.

You don't have to be an archaeologist to know a lot about the past either. If you have listened to older people tell stories about life when they were younger, or have watched life change as you grew up, you know a lot of interesting things about the past. You can be a

valuable historian by talking with others about the things you remember. By learning about the past, and sharing the things you remember, you can help keep your island's past—your cultural heritage—alive.

For Further Reading

In writing this article, many different books and articles were used to get the needed information. Several of these books and articles are listed below. You may enjoy reading some of these books and articles yourself to learn more about life on early sugar plantations and the cultural history of the West Indies. Ask your local librarian to help you locate them.

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Mark Cherrington. "Island Portraits," in Earthwatch, Vol. 4, No. 4, July-August 1985.

Montserrat Tourist Board. Irish Connection. Plymouth, Montserrat: Montserrat Tourist Board, 1985.

Pamela Mordecai and Grace Walker Gordon. "Elsie learns about Cane," in New Caribbean Junior Reader 3. Bucks, Great Britain: Ginn and Company, Ltd., 1985.

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CHAPTER IV

CONSIDERATIONS WHEN WRITING FOR DIFFERENT AUDIENCES

The North American Audience

The North American audience, as typified in Chapter II, has a distinct lifestyle. The fast pace resulting from an active family life and a demanding career creates a special need for a reader like Bill, the typical North American described in Chapter II. First and foremost, information needs to be tightly organized so that the reader, should he need to return to the work for some reason, could easily locate the section he wishes to review. Such organization in the North American article is achieved through a highly structured heading system.

Organization also affects the speed at which an article can be read. For this purpose, footnotes are grouped together at the end of the article. This arrangement, as opposed to contextual notes or notes at the bottom of each page, minimizes distractions for the reader, yet still provides extensive information if the reader wishes to locate further material.

Secondly, consider the purpose the North American has for reading the article. He is planning a trip with his family to visit

the island. It may be assumed, therefore, that he knows very little at this point about Montserrat and yet is interested in the island. To provide him with enough background to frame a discussion of Galways however, it is necessary to include in the article a section on the geography, settlement, and sugar industry of Montserrat before moving into the particular sections devoted to Galways. This description provides a context for discussing the geography, settlement, and sugar industry at Galways. An understanding of Galways plantation, therefore, is dependent upon an understanding of Montserrat in general.

Furthermore, the article gives a detailed description of the plantation structures. This description is necessary so that when the reader arrives in Montserrat and sees Galways plantation, he will have a sense of its total scope and a knowledge of the function of each structure. While past lifeways on the plantation may be an interesting subject, it is beyond the scope of this article. This article is about Galways plantation, and centers on the production of sugar, not the preservation of past lifeways.

The West Indian Audience

The West Indian audience has distinctly different needs from the North American audience. They live at a much more relaxed pace, and therefore do not have as great a need for highly structured headings. Their casual lifestyle does not dismiss all need for

structure, however. There are headings in the West Indian article, but these headings are much less technical--not numbered, not in all capitals. These headings serve to break up the reading, to give the reader a sense of accomplishment for having read a section of the article. This is especially important due to the lower educational and reading level of the West Indian audience.

As in the North American article, the manner of referencing contributes to the organization. More important in this article, however, is that the reader gain the benefit of action, be it that she goes and sees Galways plantation again or has the librarian find a book for her to read. A list of books and articles is placed at the end of the West Indian article rather than a series of formal footnotes, for the West Indian reader described in Chapter II would rarely, if ever, have need to cite a footnote as a source. What she needs instead is an easily discernible list of related books and articles on an equivalent reading level.

While the North American article discussed the geography, settlement, and sugar production of Montserrat, this information is not presented in as great detail in the West Indian article because the West Indians are already familiar with the geography of the island. They have, however, a strong cultural tie to Galways. For this reason, a more developed explanation of the past lifeways (building, gardening, collecting water) and current activities (Montserrat National Trust, summer field schools) is presented in order to reinforce the reader's bond with the past and present at Galways.

The final significant characteristic of the West Indian article is word choice. To set a friendly tone, first person point of view, contractions, and colloquial terms (i.e. "mould" for soil) are used in this article although avoided in the North American article. In addition, words with fewer syllables are chosen and sentences are shorter (as evidenced by the results of the readability tests in Chapter I).

Conclusions

To highlight the impact of audience, compare the following descriptions of the boiler and flue system. The first passage is from the North American article, the second from the West Indian article.

The lower story of the west wall is penetrated by openings which are part of the controls of the oven and flue system that heated the kettles above (Figure 9). Plantation owners used dried sugar cane stalks, called bagasse, as fuel. This fuel was added to the oven through the openings at the south end of the west wall. The fuel rested on a grate as it burned. The ashes fell through the grate and were removed through a tunnel-like passage that curves up and to the right under the grate to the left of the boiler. A chimney, located in the middle of the boiling house, drew the heat through the flue.

Then it [the cane juice] flowed into the largest of the five iron kettles, or coppers, along the boiling house wall. The coppers sat over a boiler and flue system. Dried cane trash, called bagasse, was used as fuel. The bagasse was added to the oven through the outside openings in the boiling house wall. You can see these openings in Figure 11. The bagasse rested on a grate as it burned. The ashes fell through the grate and were removed through a tunnel-like passage. This passages curves up and to the right under the grate. A chimney in the middle of the boiling house, drew heat through the flue and under the kettles. The cane juice would heat up and begin to boil.

In these two paragraphs, the difference in point of view, tone, sentence structure and word choice is illustrated. While the first paragraph maintains a business-like third person point of view, the West Indian selection takes on a friendlier tone as achieved through the first person point of view. Sentence structure also differs between the two examples. The North American paragraph is composed of long, sentences complicated with multiple phrases. The West Indian paragraph has an average sentence length of ten words as compared to the average sentence length of twenty-one words in the North American paragraph. Yet despite the lower number of words per sentence in the West Indian paragraph, all of the information in the North American paragraph is included in the West Indian paragraph. For simplification, however, the West Indian sentences are kept short. Where the North American article reads "ashes fell through the grate and were removed through a tunnel-like passage that curves up and to the right under the grate to the left of the boiler," the West Indian article breaks the same idea down into two sentences which read, "ashes fell through the grate and were removed through a tunnel-like passage. This passage curves up and to the right under the grate." It is important to note that sometimes, as is the case here, the information chosen for each audience may be the same. It is the presentation of that information, however, which will almost consistently be different.

Neither the North American article nor the West Indian article is superior to the other. Each work is designed for a particular

audience, and works best for that audience. To write successfully, there is no substitute for the author's conceptualization of the audience, be it through readability tests, character scenarios, or personal observation. Any written work is only as successful as its reader is in understanding the author's message.

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