

King Cotton, The Spinning Wheel and Loom in The Sandwich Islands

The Story of a Missionary Spinster, An Ambitious,
Wealthy Hawaiian Chief,
and an Island Industry that Never Quite Made It

Rossie Moodie Frost

“We are very well—Mrs. H. has been hard at work putting a piece of cloth into the loom and the first cloth ever woven in the Sandwich Islands has been woven this day. . . .”¹ So wrote the Reverend Harvey Hitchcock from Molokai to Levi Chamberlain, the business agent of the American Mission in Hawaii in November of 1832. He was justly proud of his wife’s work. The Hitchcocks had arrived in the Islands only six months before, and he wanted his brethren in Honolulu to know that like the other Missionaries who had arrived before them, they had no time to be idle. During July, as she awaited in Lahaina the birth of their first son, Mrs. Hitchcock wrote to her mother that she was so glad she had taught her to spin and weave, because even in the remote Islands of the Pacific, she would find use for this knowledge.²

While Mr. Hitchcock was busy selecting a site for a Mission station of the Island of Molokai, his wife persuaded the Reverend Lorrin Andrews to have some of his students convert the four wheels she had discovered in the Mission store-house in Lahaina into spinning wheels.³ She and Miss Ogden, another Missionary stationed at Lahaina, began to teach the Hawaiian women to card and spin the cotton they found growing wild.⁴ A simple loom was constructed for them by a foreign carpenter, and it was an exciting day when Mrs. Hitchcock took this locally spun cotton and wove what they believed to be the first piece of cloth ever produced in the Sandwich Islands.

They had no way of knowing that she was not the first to use a loom in Hawaii. Although much progress had been made in the use of the Hawaiian language by the Missionaries, there must still have been areas where communication was difficult. Perhaps some of the older chiefs

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remembered, but chose not to tell, of events which had occurred during the reign of the great Kamehameha.

In 1809, Kamehameha took a fancy to an unfortunate sailor by the name of Archibald Campbell, who, abandoned by his shipmates, had learned to get about by himself despite the fact that both his feet had been cut off. A sailmaker by trade, he was first employed in the Islands to overhaul the sails of the King's vessels. When he had completed this, Kamehameha asked him to make canvas for new sails. In order to do this, he needed a loom. Kamehameha directed his carpenter, a *haole* named Boyd, to make one. Boyd refused. He and Isaac Davis and a few other *haoles* attached to the King's court apparently thought that if they taught the Hawaiians new skills, the latter would soon excel their teachers, who might then lose their positions of influence. Fortunately, Campbell did not hold this opinion—he wanted to share what skills he had—and so he set about building a loom himself. The Hawaiians were fascinated, especially a young chap called "Jack", who was a servant to Isaac Davis and worked as a tailor. The loom was finally completed and the weaving began. The "thread" was spun by the women from the fibres of a plant from which fishing lines were made.⁵ This skill the early Hawaiians had brought with them. This *olona* twine was prepared by drawing freshly cut stem between rounded sticks to remove the juices, scraping the stem with a pearl shell or turtle rib, and spinning the cleaned fresh fibre into a cord. Like the women of Homeric Greece,⁶ the women of early Hawaii did the spinning by rolling the fibre on their bare thighs.⁷

One of the young *alii* who had asked the young sailmaker to teach him how to read, must have watched the weaving process with great interest. Archibald Campbell could not remember his name, only that he was called by the white people, "John Adams", and that he was a brother of the queen, Kaahumanu.⁸

The weaving must have been difficult, as Archibald was obliged to employ a small boy to work the treadles, since the loss of his feet prevented his doing so himself.⁹ When a small piece was completed, he showed it to the King, who was delighted and at once wanted enough for an awning for a ship. Even making the material a yard wide and sewing it together would require another loom. But the King was enthusiastic and the work was started. Proudly, Kamehameha displayed the small piece to visiting sea captains as an example of what could be manufactured in the Islands.¹⁰ Unfortunately, Kamehameha's hope for a future industry was cut short when Mr. Campbell's desire to see his old friends overcame his love for Hawaii, and he left the Islands with regret in 1810 before the larger loom was completed.

What happened to the looms which Archibald Campbell built or whether any further attempts were made to weave cloth of *olona* fibre are things we may never know. King Kamehameha's interest in weaving was undoubtedly based more on a desire to compete in world markets than on the actual needs of Hawaii. There was really no need for cloth. Native *tapa* served very well for the limited Hawaiian wardrobe, for bed quilts, as well as for sails for the King's vessels. Its manufacture required hours of tedious labor, but time was plentiful, and labor was free. Women chiefs occasionally dressed in silks, satins or calicos given to them by sea captains, or received in trade for sandal wood, but most of the *malos* and *pa'us* worn by the Hawaiians of Kamehameha's day were of native *tapa*.

There seems to be no record for the next few years of spinning or weaving, except for the *olona* cord spun by the women for their men to use for fish lines and for securing the parts of their thatched dwellings.

But in April of 1820, a small barque called the *Thaddeus* was sighted off Kawaihae.¹¹ Her arrival opened a new chapter in Hawaiian history, including among many more important things, a greater interest in cloth and clothing. With the group of Hawaiian *alii* who boarded the vessel of Kawaihae was Kalakua, a widow of the late Kamehameha. She and the other female chiefs examined with great interest the prim dresses with their full skirts, tiny waists, long sleeves and high neck lines which completely enveloped the pale-faced young ladies from New England, members of the Pioneer Company of Missionaries who had come to spend the rest of their lives in the Sandwich Islands. Accustomed to obtaining whatever she wanted, Kalakua, despite language difficulties, managed to convey the idea that she wanted a dress made for herself, just like the *haole* ladies wore.¹² A few days later, when she proudly stepped ashore at Kailua, Kona, clad in her white cambric gown, with a lace trimmed cap and neckerchief, she was cheered by hundreds of natives. As the New England ladies in their simple, inexpensive, yet fashionable dresses entered the picture, products of the spinning wheel and loom took on greater importance in the Sandwich Islands.

A few months later, after moving into their new thatched dwellings in Honolulu, the Missionaries unpacked the few belonging they had brought with them. Mrs. Daniel Chamberlain noticed the great interest displayed by the chief Keeaumoku from Maui (called Governor Cox by the *haoles*) in her spinning wheel. A common article in most New England households, where every girl learned to spin and weave as part of her basic education, it was a novel and exciting bit of equipment in the Sandwich Islands. Mrs. Chamberlain stopped what she was doing and showed a delighted Governor Cox how the spinning wheel worked to produce both cotton and linen threads.¹³ If he noted the similarity to the Hawaiian

method of producing twine by rolling on the bare thigh, he did not share this observation with Mrs. Chamberlain.

Because of poor health and a need to provide education for their children, the Daniel Chamberlains left the Islands in 1823. Although the ladies who remained with the Mission held classes in homemaking for the native women, their busy lives apparently left little time for the relaxing arts of spinning and weaving. At least there does not seem to be any further mention of the wheel or the loom until the arrival of Mrs. Hitchcock in 1832. After moving to Kaluaaha, Molokai, her family chores and classes for native women in homemaking and Bible study kept Mrs. Hitchcock too busy to spin or weave, and the equipment made for her at Lahaina must have stood idle.

But her weaving had awakened other Missionaries and some of the Hawaiian chiefs to commercial possibilities in the Sandwich Islands. In 1833, William Richards, Lorrin Andrews, Ephraim Spaulding and Alonzo Chapin combined their efforts to write from Lahaina to the American Board of Commissioners for Foreign Missions in Boston to suggest that a manufacturer and machinery be sent out to commence a cotton manufacturing industry in the Islands.¹⁴ After considerable discussion with the chiefs, they felt assured that the latter would erect the necessary buildings, and once the work was "a going", the Hawaiians would carry it on. A similar request was made to the ABCFM by Messrs. Thurston and Bishop from Kailua, Kona.¹⁵

Unable to ship costly machinery, the ABCFM in 1835 sent out instead with the Seventh Company of Missionaries, Miss Lydia Brown, especially assigned to teach Hawaiian women the arts and crafts of homemaking "with particular emphasis on spinning, weaving, knitting &c."¹⁶ Just one month short of 55 years when she came to the Islands, the oldest Mission member to begin in this field, she was no machine, but came close to being a human dynamo. Occasionally she complained of ill health, but more often her letters told of long hours of demonstrating and supervising the use of the spinning wheel and loom. She wrote for lumber to repair her own wheels, made her own clothes, survived two or three of Molokai's violent storms (which flooded and almost washed away her dwelling) and, when her school was destroyed, supervised the building of a new one.

When she arrived, she, too, found cotton growing wild, and persuaded the children of the Levi Chamberlains to pick some for her.

This "wild" cotton must have been part of that planted by Don Francisco Marin in 1812 and in 1817.¹⁷ Years later, James Hunnewell recalled that Kamehameha had been particularly proud of this cotton grown in the Islands, and had sent samples to China. Other samples were sent by Liholiho in 1823. Competent judges pronounced these to be of excellent

quality, very fine and of long staple, similar to the American Sea Island cotton, known to be one of the world's best.¹⁸ Kalanimoku, Liholiho's prime minister when the Missionaries arrived, also had cotton planted in large areas throughout the Islands in 1825 and 1826.¹⁹ Other chiefs encouraged the planting of cotton on a somewhat smaller scale. Later native church members planted cotton at Hilo, Hawaii, and at Waioli, Kauai, to earn money for new church buildings and contributions to foreign missions.²⁰

After she was settled at Wailuku, Maui, where she had been assigned to teach, Miss Brown thanked her young cotton-picker, Warren Fay Chamberlain, who was only six years old at the time, in this delightful letter:

You will remember that while I was with you, you gathered & brought me all the cotton you could find & I told you when my wheel &c were set up so that I could spin I would spin you yarn enough for a pair of stockings & send you; so that you might see that yarn can be made in the Sandwich Islands & I shall send with it a piece of cloth that you may know that cloth can be made too, & I shall send some little stocking yarn, that the natives spun that you may know they are learning to spin. They have spun enough for quite [a] piece of such cloth, thirty seven yards [long]. I have more—I should like very much if you could see our work going on.

I always mean to be careful to do for children whatever I tell them, as I wish to set them an example of faithfulness to do what they say they will. If your Mother has not time to knit your stockings perhaps your little sisters will when they are old enough. . . .²¹

On July 31st, 1835, just seventeen days after she had arrived in Wailuku, the indefatigable Miss Brown had unpacked her equipment, settled her personal belongings, found a room large enough for several spinning wheels and a loom which she assembled and adjusted, and met with her first class of six young Hawaiian women. By September they had spun enough to make 37 yards of cloth, and two more had joined the class. At the end of the year, with Miss Brown's help, they had made 90 yards of cloth.²² As each group of six or eight became proficient in carding and spinning, Miss Brown dismissed them and took a new group.

Like other schools taught by the Missionaries, the spinning and weaving classes opened with prayer, and the interest in the students went far

Lahainaluna Print of Mission Building in Kaluaaha, Molokai, believed by the writer to be Miss Brown's School which was built at her own expense. This belief is based on a careful comparison with the copy of a Lahainaluna Print of the entire Kaluaaha Station which appeared (with a letter from Mr. Hitchcock) in the Missionary Herald for May 1844, together with the survey maps of Kaluaaha which accompanied LCA 387, Part 3.

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beyond their learning basic manual skills. Their teacher wrote to the Mission committee on manufacturing that she was far more concerned that habits of industry would have an important bearing on their moral character.²³

One can detect a small note of suppressed excitement in the otherwise calm and self disciplined teacher when she reported in August of 1835 that she had had a visit from "no less a personage than the great Gov. of Hawaii."²⁴ He must have spent most of the morning watching her class, and was fascinated with the processes of carding, spinning, warping and weaving. He was particularly interested in watching the reeling of the spun thread onto a clock reel.²⁵ Here was something his people could use, even for winding up fish lines.

This was the same young chief who had begged Archibald Campbell to teach him to read and write, and who undoubtedly saw the loom which Campbell had made and used about twenty-five years before. He may also have watched a spinning demonstration by Mrs. Daniel Chamberlain. But like Governor Cox, if he had memories, he does not seem to have shared them with Miss Brown. At the time of his visit to her class, Kuakini, or Governor Adams, was one of the foremost chiefs of the Islands. Greatly respected by the *haole* population for his intelligence and command of the English language, he was considered Hawaii's shrewdest business man and probably the most wealthy.

One of Miss Brown's pupils, the daughter of a chief,²⁶ (believed to be Kuakini) began to spin at home, and proudly brought a sample of yarn for her teacher's inspection, seeking advice on the number of skeins required for the warp and web of her first piece of cloth.²⁷ Kuakini must have solved the teenager problem at home as well as saved on his clothing budget by keeping his family well occupied. He became so interested in the manufacture of cotton that he had his young wife and others in his family spinning and weaving with considerable success.²⁸

However, this ambitious and resourceful chief was not satisfied with limiting this new activity to his home. Conscious that the Hawaiian people needed some means of employment to survive in a world that was rapidly changing around them, and to give life to what was already becoming a dying, enervated population, he sought wider outlets for these skills. In

Miss Lydia Brown

From a Daguerreotype about 1852

Miss Brown was born in Wilton, New Hampshire, and arrived in Honolulu aboard the Hesperont on June 6, 1835. She spent the rest of her life, until her death on November 19, 1865, in the Islands teaching Hawaiian women and girls the arts and crafts of domestic life.

Reproduction—courtesy of Hawaiian Mission Children's Society

the fall of 1837, he succeeded in fulfilling his expressed desire to build the first factory at Kailua, Kona. Thirty by seventy feet in size, it was built of stone, laid up in mud, had a thatched roof and was well lighted with glass windows.²⁹ Wanting the best that was available, Governor Adams tried to persuade Miss Brown to come to Kailua to train the women to operate the spinning wheels and looms. But either because the Mission deemed it inadvisable for her to leave the work she was doing so well in the Mission school, or because she herself preferred to stay where she would be her own boss,³⁰ the Governor had to compromise and be satisfied with three of the young ladies Miss Brown had taught.³¹ He had a foreign carpenter make the first spinning wheel. Using this as a model, native craftsmen made about a dozen more—later ten more were added. He also had two looms made, undoubtedly patterned after those which Miss Brown was using.

Miss Brown could well be proud of her students who had gone to Kailua in her place. By the first of January, 1838, the factory was in full operation. Twenty-two spinning wheels wound out fine, even threads of superior quality. The thirty Hawaiian women, ranging in age from 12 to 40 years, soon surpassed their teachers in skill.³² Governor Adams was determined that the goods produced in his factory should excel those of European manufacture,³³ and for a while at least, was able to pass on his enthusiasm to those who worked for him.

Somehow he had managed to procure a small Chinese cotton gin to separate the cotton from the seeds. As Commodore Wilkes wrote, this was scarcely better than using the fingers,³⁴ but its procurement and use were typical of Kuakini. If equipment was available to do a better job, he wanted it for himself and for Hawaii. Carders were imported from the United States. When he learned that there was an American in the area who was experienced in weaving, he employed him to work in the factory and train four young Hawaiian men to work with him.³⁵

There must have been sort of a gentle rivalry between Miss Brown's classes and the American who was supervising the cotton factory for Kuakini. If Kuakini did not visit Miss Brown's classes, he undoubtedly had ways of knowing what they were accomplishing. As early as December of 1836, Miss Brown proposed to the chiefs that they should dye some of the yarn her students had spun (using the native skills for dyeing tapa), and that she would let each of the women weave from the dyed thread enough cloth to make a dress.³⁶ She sent samples of what she called "S. [andwich] I. [sland] gingham" to Levi Chamberlain to distribute among the "sisters" at Honolulu, and suggested that a piece of it be sent to the ABCFM rooms in Boston.³⁷ The natives were so pleased with the colored cloth that she couldn't resist adding, "I have not seen so much heathenish

gesticulation since I have been on the Islds as when they first came to see it."³⁸

A little later she reported that some of the students who had completed her classes were spinning and weaving at home, and that one of them was going to set up in business. With considerable pride, she noted that she had had the satisfaction of seeing the last group she had taught, when they completed their classes, dressed in garments of their own manufacture.³⁹

At first the cotton factory limited its production to plain and twilled cotton cloth. Under the direction of the American, and probably after a little prodding from the ambitious Kuakini, the factory output included a greater variety. A *Sandwich Island Gazette* reporter wrote after a visit in September of 1838 that one of the two pieces in the looms was a piece of twilled striped cotton—the first piece of striped material ever made in the factory.⁴⁰ Commodore Wilkes later mentioned having seen several pieces of brown striped and plaid cotton.⁴¹ While Kuakini's wealth certainly did not come from his factory, for a while this venture must have done very well financially. The factory-made twilled and plaid cloth sold for fifty cents a yard. It became fashionable,⁴² and it must have given not only the Governor, but also some of the Missionaries who had encouraged the project, a modicum of pride to see the young *kanaka ho'okahakaka* (dandies) strut about in Hawaiian made finery.

Wanting to further improve his operation, the Governor sent to the United States for some machinery. Unfortunately, a number of the natives took advantage of the wait for new equipment and left the factory,⁴³ possibly to find something more exciting, possibly to find something more remunerative, as they were paid in cloth.⁴⁴ The American who supervised the work chose this period to leave, and the factory stood empty for a while. Later some of the natives returned.⁴⁵ Late in 1840, when Francis Allyn Olmsted visited the factory, it was deserted and the only evidence of its former use were a few hanks of cotton hanging from a post, two spinning wheels and a loom or two.⁴⁶

It was said that the cotton factory failed because the Governor found he could buy coarse cotton more cheaply than he could make it.⁴⁷ This may have been the reason—he loved money. He also liked tobacco, *awa* and rum, and these were beginning to take their toll. A man with great drive despite his almost 400 pounds, he had supervised the work of thousands of men in building causeways, dams for enclosing fish, large churches all over the Island of Hawaii,⁴⁸ as well as his own magnificent-for-its-time house at Kailua, Kona. But at fifty, his tremendous energy gave out, and he must have been unable to continue his personal supervision and interest

in the project—which had undoubtedly accounted for its earlier success. In 1844 he became ill, and he died on December 8 of that year.

The once-thriving factory for which he had hoped so much became a store-house and residence.⁴⁹

In the meantime, Miss Brown had moved to Molokai to continue her classes in spinning and weaving. Here the natives were so interested that they had planted cotton for her use on the almost inaccessible peninsula of Kalaupapa,⁵⁰ long before this area was occupied by lepers. When the work at the Kailua factory was beginning to come to a halt in 1840, Miss Brown, after installing floor boards to keep her wheels standing firm and level,⁵¹ started with a new class of girls at Kaluaaha. In 1846, this energetic lady was still going strong, teaching, in the morning, ten older girls to spin and knit in a snug stone school house built at her own expense; and in the afternoon, teaching English to a class of fifteen little girls.⁵² Two years later, the Reverend C. B. Andrews reported that the skill acquired by her scholars in knitting and spinning acted like leaven in dough to encourage others to learn. Every girl wanted to learn to knit, and it was impossible to keep enough yarn and needles on hand to satisfy the demand.⁵³ Miss Brown continued her work at Kaluaaha (impressing the Reverend Henry Cheever with her industry on his visit to Molokai in 1850) until she was 77.⁵⁴ She died eight years later in Honolulu at the age of 85.

During her last years, she followed with great interest the progress of the Civil War, sharing with other Missionaries an intense disapproval of slavery, and rejoicing at each victory of the Union Army. Though not directly involved, she must have been pleased at the impetus given to the raising of cotton in the Islands because of this war. The curtailed production in the slave states of the South resulted in opening up the markets for cotton growers in other parts of the world, including Hawaii.

At this same period, an old friend of the Missionaries, James Hunnewell, who had been aboard the *Thaddeus* with the Pioneer Group in 1820, was so interested in promoting the cultivation of Island cotton that he sent out barrels of the best seed he could obtain in order to assure superior quality while the old seed was being restored to its former excellence by cultivation. He also sent out cotton gins especially “adapted to the commencement of cultivation”.⁵⁵

The Hawaiian Government had tried to promote the cultivation of cotton as early as the 1840's by granting land leases on liberal terms and promising tax relief.⁵⁶ Further encouragement was given by the Royal Hawaiian Agricultural Society shortly after its formation in 1850. Among other annual premiums they agreed to award was one for the best woven native cloth.⁵⁷

In 1861, the Honorable Judge Ii made a tour of Oahu, urging the natives to plant cotton, and distributed seeds for their use.⁵⁸ Some seed was even sent from Liverpool, England.⁵⁹

By far the greatest encouragement was given at this time by Henry M. Whitney, son of a Pioneer Missionary and father of the *Hawaiian Gazette*, the *Pacific Commercial Advertiser*, and for several years editor of the *Hawaiian Planter*. He wanted not only to stir up the Hawaiians living on their own land to help themselves and increase the prosperity of the islands, but he also wanted to reduce the cost of printing by the use of locally grown cotton for the production of printing and writing papers. He urged the planting of cotton editorially, did some experimental planting, and offered prizes to the native Hawaiians who could produce the largest quantity of Sea Island cotton during the year 1866.⁶⁰ The first prize was \$200 in gold, the 10th prize was four bound volumes of the native newspaper, *Kuokoa*.⁶¹

During this period, Hawaiian growers exported hundreds of bales of cotton to Boston. Gins were located in the vicinity of the old Post Office at Merchant and Bethel.⁶² In July of 1865, there arrived by the *Ceylon* from Boston samples of spool cotton thread manufactured by the Hadley Manufacturing Company from a small lot of Sea Island cotton grown in Hawaii in 1864 and shipped by H. M. Whitney. These spools were neatly arranged in a black walnut stand covered with glass, and the public was invited to the *Pacific Commercial Advertiser* Office to see them.⁶³ Two spools of this Hawaiian cotton thread manufactured by the Hadley Company were procured by the Honorable George R. Carter from the descendants of a prominent Hawaiian *alii*, and he was delighted to be able to present them to the Hawaiian Mission Children's Society. They are now on exhibit at the Mission Houses Museum.

Despite the lack of sufficient knowledge and experience on the fine points of cotton cultivation and marketing, the experiments by Mr. Whitney and others began to look promising, when the sugar era rose like a sun over the horizon, and cotton, potatoes and other experimental crops faded into the background.⁶⁴

At the turn of the century, new experiments were made by L. D. Timmons. Once again it was proved that cotton could become an exceptionally profitable and satisfactory crop in the Islands. "Cotton once more had come within a hair's breadth of developing into an established industry."⁶⁵ But the annexation period, as well as cotton's former rival, sugar, eclipsed glowing prospects.

An interest in cotton survived, however, and more experiments were made about 10 years later. In addition to Mr. Timmons, members of some of Hawaii's best known families supported the venture. Included were E.

W. and R. A. Jordan, A. W. Van Valkenberg, A. Frank Cooke, W. L. Howard, E. C. Smith, and others. They worked with Dr. E. V. Wilcox and others in the United States Experimental Station. They were concerned mostly with the long staple Sea Island and Caravonica or "kidney" cotton. (Called kidney because the seeds, stripped of lint, form a kidney shaped mass.) These cottons are of such high quality that there are usually no price quotations in any market center. The product is sold on samples at prices set by the textile manufacturer according to his need for lint of a certain length and fineness.⁶⁶ The finest sewing threads are spun from the Sea Island and kidney cottons.

This long-staple cotton venture was just getting on its feet when the government quarantined all shipments to the continental United States. This time the villain was not sugar but the "Pink Boll Worm".⁶⁷

For a while there was a fairly good home market for the local product. Many an Island pillow, upholstered chair and bed quilt was stuffed with Hawaiian grown cotton.⁶⁸

World Wars I and II intervened, and with the ascendancy of sugar, pineapple and tourism, interest in cotton has almost disappeared.

Until just a few years ago Caravonica cotton plants a dozen feet high, flowered and produced fluffy white bolls on South Street just a hundred yards mauka of the Advertiser Building in Honolulu.⁶⁹ These have disappeared, but plants with bright yellow blossoms and small white bolls can still be observed bordering the highway in Waianae.⁷⁰

The countless experiments proved beyond a doubt that the best quality cotton could be produced in Hawaii, and at a profit, even on land that wouldn't be considered for other crops. In 1866, Mr. Whitney was delighted with unusually white cotton brought to him by a native from Kona, Hawaii, which he had grown in a four acre tract of Hawaiian *aa* or lava. To Mr. Whitney's amazement, the native told him that it required no cultivation, and that the ripened bolls fell on the clean lava, keeping it unusually free of dirt.⁷¹

If the imminent closing of the Kohala Sugar Plantation and mill fore-shadows further curtailment in Hawaii's sugar industry, one cannot help wondering if the time might now be ripe for a new series of experiments in the cultivation of Island cotton. Despite the introduction of man-made synthetics, there is still a demand for cotton fabrics. Furthermore, many of today's young people are beginning to revive an interest in handcrafts. Hand spun and woven cloths have taken on a new importance. The day may yet come when the hopes and dreams of a tireless Missionary spinster and an ambitious and forward-looking Hawaiian chief for a successful Hawaiian cotton industry will become a reality.

NOTES

- ¹ H. R. Hitchcock to Levi Chamberlain—received at Lahaina No. 7, 1832, MSS*, HMCS.
- ² Mary H. Snow, *Life of Rev. and Mrs. Harvey R. Hitchcock* (typewritten unpublished manuscript)*, HMCS.
- ³ *Ibid.*
- ⁴ *Ibid.*
- ⁵ Archibald Campbell, *A Voyage Round the World from 1806 to 1812* (Honolulu: University of Hawaii Press, 1967), pp. 99-101.
- ⁶ Elizabeth Chesley Baity, *Man Is A Weaver* (New York: Viking Press, 1942), p. 112.
- ⁷ John F. G. Stokes, *Hawaiian nets and netting* (Honolulu: B. P. Bishop Museum Memoir, 1906), II, pt. 1, pp. 105-106, as quoted in Peter H. Buck, *Arts and Crafts of Hawaii* (Honolulu: Bishop Museum Press, 1957), p. 290.
- ⁸ Campbell, *op. cit.*, p. 100.
- ⁹ *Ibid.*, footnote, p. 100.
- ¹⁰ *Ibid.*, pp. 100-101.
- ¹¹ *Life and Times of Mrs. Lucy G. Thurston*, Selected and Arranged by Herself (Ann, Arbor, Michigan: S. C. Andrews, 1882), p. 25, see also the *Thaddeus Journal** for March and April, 1820, HMCS.
- ¹² *Life and Times of Mrs. Lucy G. Thurston*, *op. cit.*, p. 32.
- ¹³ *Thaddeus Journal*,* March 10, 1821, HMCS.
- ¹⁴ MH, XXIX, 268.
- ¹⁵ *Ibid.*, p. 364.
- ¹⁶ MH, XXXV, 264.
- ¹⁷ *Extracts from the Journals of Don Francisco de Paulo Marin*—typed copy of Mr. Wyllie's translation from original Spanish, AH; entries for April 22, 1812, and page 9, Vol. 4, 1817.
Extracts from this Journal, which mention the planting of cotton, are also quoted in Laura Fish Judd, *Honolulu from 1828 to 1861* (Honolulu: The Honolulu Star-Bulletin, 1928), p. 169.
See also Otto von Kotzebue, *A New Voyage Round the World* (London: Henry Colburn and Richard Bentley, 1830), II, 192.
Marin's terse entries in his Journal do not indicate the source of his cotton seed. L. D. Timmons (see HAA, 1910, p. 161) believed that the earliest cotton was a "kidney" or Brazilian cotton which had come from somewhere in the South Seas.
- ¹⁸ F, March 1862, p. 24.
- ¹⁹ Samuel M. Kamakau, *Ruling Chiefs of Hawaii* (Honolulu: The Kamehameha Schools Press, 1961), p. 278.
- ²⁰ Hiram Bingham, *A Residence of Twenty-One Years in the Sandwich Islands* (Canandaigua, N.Y.: H. D. Goodwin, 1855), pp. 399-400—mentions cotton planted by Naihe and Kapiolani on Kauai.
Hilo Plantings: MH, XXXIV, 261.
Waioli Plantings: *Ibid.* p. 263.

- Cotton was also planted at Haiku, Maui, 55 acres of it in 1838, by an American named Charles R. Smith. (*Hawaiian Spectator*, Vol. 1, no. 2, p. 91).
- ²¹ Lydia Brown to Warren Fay Chamberlain, Oct. 5, 1835, MSS*, HMCS.
- ²² Report to the Committee on Manufacturing by Lydia Brown, June 3, 1836*, HMCS.
- ²³ *Ibid.*
- ²⁴ Lydia Brown to Levi Chamberlain, Aug. 18, 1835, MSS*, HMCS.
- ²⁵ *Ibid.*
- ²⁶ Report to the Committee on Manufacturing by Lydia Brown, June 3, 1836, MSS*, HMCS.
- ²⁷ *Ibid.*
- ²⁸ Hiram Bingham, *op. cit.*, p. 476.
- ²⁹ MH, June 1838, p. 235 (Letter from Asa Thurston to ABCFM dated Oct. 30, 1837).
Station Report for Kailua, Kona by Seth Andrews for year ending May 1838*, HMCS.
Charles Wilkes, *Narrative of the United States Exploring Expedition, During the years 1838, 1839, 1840, 1841, 1842* (Philadelphia: Lea & Blanchard, 1845), IV, 97-98.
- ³⁰ I'm inclined to believe that this was the reason, as she was a very independent lady. Seth Andrews indicates in his Station Report for the year ending in May, 1838, that it was not deemed advisable that Miss Brown should leave Wailuku.
- ³¹ Seth Andrews, Station Report for the year ending in May 1838.* HMCS.
- ³² *Ibid.*, and Wilkes, *op. cit.*, p. 98.
- ³³ Wilkes, *op. cit.*, p. 97.
- ³⁴ *Ibid.*
- ³⁵ *Ibid.*; Andrew, *loc. cit.*; and SIG, Sept. 15, 1838. This foreigner may have been Mr. Rice, a member of the Kailua, Kona Church, who contributed to the church in 1838, 15 yards of cloth. (Kailua, Kona Station Report for 1838*, HMCS).
- ³⁶ Lydia Brown to Levi Chamberlain, Dec. 25, 1836, MSS*, HMCS.
- ³⁷ *Ibid.*
- ³⁸ *Ibid.*
- ³⁹ MSS note of Miss Lydia Brown,* undated, but believed to be a report to the Manufacturing Committee, possibly 1837 or 1838, HMCS.
- ⁴⁰ SIG, Sept. 15, 1838.
- ⁴¹ Wilkes, *op. cit.*, p. 98.
- ⁴² Letter from Dr. S. L. Andrews, Kailua, Nov. 9, 1838, as quoted in *Pilgrims of Hawaii* by Rev. and Mrs. Orramel Gulick (New York, Chicago, etc: Fleming H. Revell Company, 1918), p. 178.
- ⁴³ Wilkes, *op. cit.*, p. 98; Francis Allyn Olmsted, *Incidents of a Whaling Voyage* (Tokyo, Japan: Charles E. Tuttle Co., 1969), p. 224.
- ⁴⁴ James J. Jarvis, *Scenes and Scenery in the Sandwich Islands* (Boston: James Munroe and Company, 1843), pp. 213-214.
- ⁴⁵ Wilkes, *op. cit.*, p. 98.

- ⁴⁶ Olmsted, *op. cit.*, p. 224.
- ⁴⁷ F, April 15, 1845, p. 57.
- ⁴⁸ Titus Coan, *Life in Hawaii, An Autobiographical Sketch of Mission Life and Labors (1835-1881)* (New York: Anson D.F. Randolph & Company, 882), pp. 228-229.
- ⁴⁹ F, April 15, 1845, p. 57.
- ⁵⁰ Ethel M. Damon, *Siloama, The Church of the Healing Spring* (Honolulu: Hawaiian Board of Mission, 1948), p. 50.
- ⁵¹ Lydia Brown to Levi Chamberlain, August 6, 1840 MSS*, HMCS.
- ⁵² C. B. Andrews to his sister, May 1846, MSS*, HMCS.
- ⁵³ Report of School & c of Molokai by C. B. Andrews, May 1848*, HMCS.
- ⁵⁴ Rev. Henry T. Cheever, *Life in the Sandwich Islands* (New York: Harper & Brothers, 1851), p. 171.
- ⁵⁵ F, March 1862, p. 24, letter from James Hunnewell to the Editor, dated Boston Dec. 4, 1861.
Before moving to Boston, Mr. Hunnewell had resided for several years in the Islands as a merchant, founding the Company later known as C. Brewer and Company.
- ⁵⁶ PCR, Mar. 20, 1848, IV, 406.
FO & EX, Doc. No. 88 nd.
- ⁵⁷ Josephine Sullivan, *A History of C. Brewer & Company, Limited* (Boston: Walton Advertising & Printing Company, 1926), pp. 102-104. In 1851, a silver medal was awarded for 20 yards of woolen cloth. The sheep were raised, wool shorn, spun and woven by Jos. Gardener of Kauai. (*Proceedings of Royal Hawaiian Agricultural Society*, Aug. 1851, pp. 12-14).
- ⁵⁸ PCA, Sept. 12, 1861.
- ⁵⁹ *Ibid.*
- ⁶⁰ PCA, Dec. 9, 1865, p. 3. It was stipulated that 10 or more acres be cultivated to produce 10,000 pounds or more of Sea Island cotton.
- ⁶¹ *Ibid.*
- ⁶² PP, May 1904, p. 15.
- ⁶³ PCA, July 29, 1865, p. 3.
- ⁶⁴ L. D. Timmons, *Cotton in the Hawaiian Islands*, in HAA, 1910, pp. 160-164.
- ⁶⁵ *Ibid.*
- ⁶⁶ Jared G. Smith, *Farming History*, in HA, March 20, 1950, p. 10.
- ⁶⁷ *Ibid.* Apparently this cotton moth present in Hawaii at the time had not been observed in the South, but has since taken foothold through Mexico. As Mr. Smith observed, "The national embargo kept Hawaii from taking the blame, thanks be!"
- ⁶⁸ *Ibid.*
- ⁶⁹ *Ibid.*
- ⁷⁰ This writer's observations on several trips to Waianae in 1970 and 1971.
- ⁷¹ PCA, Jan. 6, 1866, p. 2.

*Quotations from, and references to unpublished journals, reports, and manuscript letters written by Missionaries are made through the courtesy of the Hawaiian Mission Children's Society.

In addition to Governor Adams' cotton factory at Kailua, Kona, record was found of some other early mills. So little information concerning them could be located, that their story was not included in this paper. A small factory was located at Wailua, Kauai. We know only that it was run by a foreigner, employed local spinners, and was located near the residence of Deborah, wife of Tamoree. (P, Sept. 9, 1848). Later, a gas-powered gin and carding wheel were used at a small mill near Holualoa, North Kona. (HA, Mar. 20, 1950, p. 10.)

While cotton was by far the most important, the early spinning wheels and looms were also used for other fibers. At Waimea, Hawaii, Mrs. Lyons christened her great wheel by spinning a real yankee yarn mop of wool (Emma Lyons Doyle, *Makua Laiana*, p. 132). Experiments with silk were made at Wailuku, Maui (J. S. Green to Rev. Anderson, ABCFM, Jan. 24, 1839, HMCS). Also at Wailuku, the ingenious Mr. Edward Bailey, better known for his drawings and paintings, built a loom for weaving matting. (Wailuku Station Report for year ending May, 1841.)