

9-2014

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Sanders, Eulanda A. and Hwang, Chanmi, "George Washington Carver: Textile Artist" (2014). *Textile Society of America Symposium Proceedings*. 895.

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## George Washington Carver: Textile Artist

Eulanda A. Sanders  
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### Introduction

Born a slave, George Washington Carver (1864-1943) is one of the most historically prominent African American scientists. Carver was a pioneer as an agriculturalist and botanist by introducing methods of soil conservation for farmers, inventing hundreds of by-products from peanuts, pecans, sweet potatoes, and soybeans, and practicing “zero waste” sustainability. Scholars have recognized Carver’s talent as a painter and his ability to develop paints and dyes from various natural sources; however, there is very little scholarship documenting his work as a textile artist. Holdings at the G.W. Carver National Monument and Tuskegee Institute National Historic indicate that Carver was proficient in textile techniques such as embroidery, weaving, crocheting, knitting and basketry. According to a document written by the National Park Service (2014), Carver created, “embroideries on burlap, ornaments made of chicken feathers, seed and colored peanut necklaces, woven textiles” (24) and that “He was an honorary member of the Royal Society of Arts in London, England” (30).

Carver’s textile work has not been documented in a scholarly manner or widely disseminated. The guiding purpose for this preliminary research was to identify images and extant pieces of George Washington Carver’s textile work located at the G.W. Carver National Monument and Tuskegee Institute National Historic to develop a synopsis of the fibers, textiles, techniques, and sustainable practices/processes he used. In this paper the researchers will provide an overview of fibers, textiles, possible dyes, and sustainable processes used by Carver to create his textile works. The hope is that examining the works of this historical figure will inspire current textile artists to explore new directions of sustainable textile arts.

George Washington Carver is revered as one of the most prominent African American agriculturalist and botanist; however, little has been documented concerning his work as a fiber and textile artist. Professor Carver was proficient in textile techniques such as embroidery, weaving, crocheting, and basketry as documented by holdings at the George Washington Carver National Monument and Tuskegee Institute National Historic Site.

It is estimated that Carver was born a slave in 1864 in Diamond, Missouri on Moses and Susan Carver’s farm, although records are not available to substantiate his birth. Little is known about his father who was assumed to be killed in a log-hauling accident shortly after Carver was born, and his mother, Mary, who disappeared while he was still an infant. The circumstance of Carver’s separation from his mother during a kidnapping by slave-raiders is among the most publicized portions of his early life, despite the lack of confirmable details (McMurry 1981). During his childhood, it is thought that Carver’s most significant role model was Susan Moses, who taught him “the ‘womanly’ skills of sewing, cooking, laundering, and needlework” (McMurry 1981, 20). Carver was raised on the Moses Carver’s property (Fig 1) until around age 9 or 10, when it is speculated that he walked 10 miles by himself to Neosho, Missouri and was found in a shed behind Mariah Watkins’ house. Carver lived with Mariah and Andrew Watkins and did chores (e.g., doing laundry, searching for plants and herbs with healing powers etc.) in exchange for room and board for several years before venturing to Fort Scott, Kansas. Throughout

Carver's youth and early manhood, his closest friends were usually older women such as Susan Carver, Mariah Watkins and Lucy Seymour (McMurray 1981).

The most documented aspects of Carver's life starts in 1890, when he becomes a student at Simpson Art College in Winterset, Iowa. While studying painting, he was encouraged by his teacher Etta Budd to attend Iowa State University (McMurray 1981) to study agriculture and earned a Bachelor's of Science degree in 1894. Budd's father was a professor of agriculture at Iowa State University. Three years later in 1897, Carver matriculated with a Master's of Science degree in agriculture and became a faculty member in the College of Agriculture. However, that same year, Carver accepted the position as the first director of the Agricultural Experiment Station at Tuskegee University in Tuskegee, Alabama.

During Carver's time at Tuskegee and prior to his death in 1943, Carver not only gained an international reputation as a scientist, he also continued his pursuit of creative works as a painter and fiber artist. Scholars in the field of textiles know little about Carver's textile work and this paper provides initial insights to his work in the textiles world.



**Figure 1.** Moses and Susan Carver's home on the George Washington Carver National Park.  
*Image by Eulanda A. Sanders.*



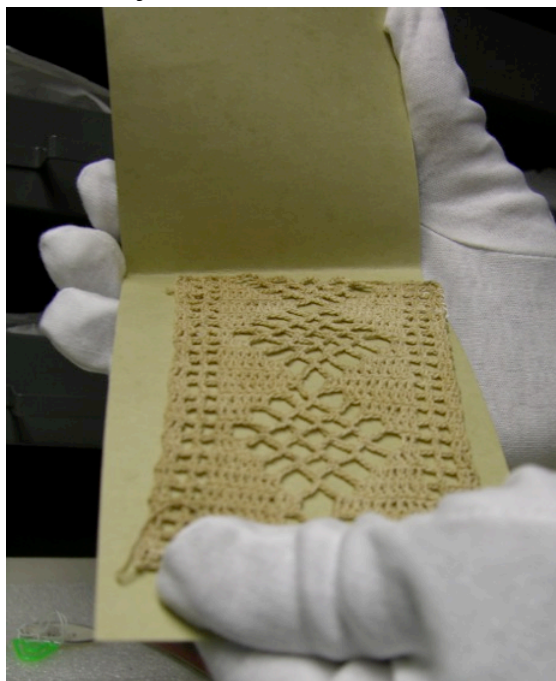
## Methods

For this research, data were obtained from: a) the George Washington Carver National Park in Diamond, Missouri, b) the Iowa State University Library: Special Collection in Ames, Iowa, d) photos taken at the Tuskegee Institute National Historic Site by Curtis Gregory [park ranger at the George Washington Carver National Park], and c) various published books and online sources for in-depth data analysis. The data from this research situates these scholars to have a foundation of understanding what Carver created and provides the groundwork for developing additional research questions and studies.

Sanders, the lead researcher, made a total of three trips to visit the George Washington Carver National Park in October 2013, January 2014, and May 2014. The researcher took field notes and documented images at the museum. She also discussed Carver's life, the holdings at the George Washington Carver National Park and the Tuskegee Institute National Historic Site, and viable sources of information with park rangers, James Haney and Curtis Gregory. Hwang, the collaborator on this research, visited the Special Collection at the Iowa State University twice in January 2014. She looked through all of the George Washington Carver Collection (1893 –[ongoing]) that contains biographical material, information about Carver's birthplace monument, news clippings, oral history interviews, publication by Carver, and research and product development. Specifically, the researcher reviewed artifact collections that were related to textiles and dyes and systematically documented the data.

## Findings

The fiber art of George Washington Carver observed in this study are categorized as follows: crochet, embroidery, basketry and weavings as identified through photographs and actual artifacts. The majority of his textile art is crochet (Fig 2). The existing samples of Carver's crochet work are complex and indicate that he was exploring mathematical patterns, crochet techniques and aesthetics, not necessarily with the intention to create utilitarian objects.



*Figure 2. Carver crochet sample. Tuskegee Institute National Historic Site. Image by Curtis Gregory.*

The majority of the holdings are at Tuskegee; however, a few are on loan to George Washington Carver National Park in Diamond, Missouri. The crochet samples examined were small in dimension, 12 inches and less created from narrow denier yarns and threads. Some have single motifs, while others have repeated motifs. The motifs were often organic in nature, such as botanic and floral or were recognizable religious symbols such as a cross. Carver employed a variety of stitches such as, chain, single crochet, double crochet in mainly fillet pattern and lace patterns. The shapes of crochet samples are generally circular or rectangular. A few of the samples are reminiscent of lace trims (Fig 3).



**Figure 3.** Carver's crochet samples. Tuskegee Institute National Historic Site. Image by Curtis Gregory.

Existing examples of Carver's embroidery work, suggest that he was quite proficient in this textile design technique. The examples include embroidery stitches such as cross-stitch, running, satin, blanket bullion and French knots used to create flora and fauna motifs. Often the samples are completed with crocheted edges in lace patterns.



**Figure 4.** Carver's embroidery samples. Tuskegee Institute National Historic Site. Image by Curtis Gregory.

Interestingly, Carver's basketry and weavings were less refined than his crochet and embroidery. His basketry was created through coiling natural fibers, such as cotton stalks in flat mat oval forms. The mats observed in this preliminary research featured a solid central coiled area bordered with an open wave pattern enclosed with an additional solid coiled border. The mats were mainly brown; however, dyes were thoughtfully used to color sections of the cotton stalks as seen in (Fig 5). The one woven textile create by Carver, examined in this research are four separate hand-woven squares all with the same warp yarn, but with various warp yarns. The rusticity of the samples indicates that they were not woven on a loom.



*Figure 5. Carver's basketry sample. Tuskegee Institute National Historic Site on loan to the Carver National Monument. Image by Eulanda A. Sanders.*

## **Recycling and Zero Waste**

Professor Carver was one of America's first recycling pioneers who explored to "conserve, recycle and utilize energy to its fullest capacity" (Gosey-Houston and Howard, 21). He demonstrated how waste could be avoided by creating new uses for raw materials by developing more than 300 products from the peanut alone. Carver's "zero waste" philosophy is also evident in the materials he used such as scraps of fabrics, yarns, cotton stalks, minerals and pigments in his textile creations. Many of the basketry and woven samples in this study indicate that Carver reused every day or discarded materials to create textile products for either sheer aesthetic purposes or utilitarian means, a common practice for the time period he lived and in the African American community (Fig 5). Of interest, is that regardless of the materials or intended use of the textile objects Carver created, attention was given to the aesthetics of the creation, demonstrating his artistic background and the role of aesthetics in his life.





*Figure 6. Painted leather, weaving, and basketry by Carver. Tuskegee Institute National Historic Site. Images by Curtis Gregory.*

Scholars verify that Carver extracted lavender and deep orange color pigments from peeling of the sweet potato (Hersey 2006). He was inspired by the soil and clay of Alabama and used them to extract dyestuffs and pigments. Carver believed that the “waste not, want not” principle was a key to being a good steward of the good earth and he urged to save everything “from what you have make what you want” (Bolden 2008, 27). Statements about Professor Carver’s work such as: “tomato vines serve as a source of dyes for fabric” (Hersey 2006, 252) and “dyes from the common clays of many states” (Wright 1946, 270) attest to his use of sustainable materials to color textiles plus documentation in his letters held at the Carver National Monument.

Carver extracted color pigments from clay soils for paints because it was readily available and he could see deposits of multicolored clays (Halvorsen 2002). Carver stated that, “clays are found in many sections of the country of a variety of colors, and by a proper choice of color there may be produced by the process of the invention a large variety of colors of pigments, fillers and stains for treating wood or other materials” (Carver 1925, 1), including textiles. In his laboratory at Tuskegee, he organized minerals according to color as shown in (Fig 6). As shown in Table 1, Carver extracted numerous dyes and pigments from 28 different plants (Tuskegee University, 2014). For instance, he used peanut to create intense brown, gray, lavender, slate, and pale canary, and used wood ashes to create yellow and khaki brown of several shades.

| Materials                    | Colors   |
|------------------------------|--|
| Wild smilax                  | khaki & browns   |
| Tomato vines                 | khaki dark browns, & lemon   |
| Osage orange                 | khaki green, yellows, black, mustard, & dark blue.                 |
| Lowly radish                 | grays, blacks, & the aristocratic silver gray                      |
| Wood ashes                   | yellows, mustard, & khaki browns of several shades                 |
| Bark of the maple            | black, dark blue, English blues, & browns of several shades        |
| Pomegranate                  | orange, mustard, yellow, green, intense black, dark brown, & gray  |
| Velvet bean                  | black brown, & gray  |
| Peanut                       | intense brown, gray, lavender, slate, & pale canary                |
| Dandelion                    | deep orange, various browns, several greens, tan, & gray           |
| Onion                        | mustard, green, intense black, lovely grays, canary, & deep browns |
| Oak leaves                   | black to light gray, khaki hues, black, & steel gray               |
| Sweet potato (peel and vine) | lovely grays, rich lavender, & deep orange                         |

*Table 1. Carver's natural dye exploration.*

Carver's textile dye work also consisted of: a) developing a process for producing paints and stains from natural clays for which three separate patents were issued (Tuskegee University 2014) and b) rediscovering Egyptian blue dye (Fig 7) a royal blue color extracted and oxidized from clay (Elliott 1966; Halvorsen 2002).



*Figure 7. Examples of minerals and pigments organized in Carver's laboratory. Tuskegee Institute National Historic Site. Image by Curtis Gregory.*





*Figure 8. Egyptian Blue pigment Carver is credited with rediscovering. Tuskegee Institute National Historic Site. Image by Curtis Gregory.*

## Conclusions

The outcomes of this research are an initial documentation of George Washington Carver's contributions in the area of textiles. Often the recognition of Professor Carver's scientific contributions iconizes him as the "Peanut Man," and minimizes the depth of his research and other scholarly contributions. Systematic documentation of Carver's fiber art is absent from the literature and it is often diminished to "handi-work" created for relaxation. A cursory examination of Carver's crochet designs demonstrates the work of a skilled artist who possessed a refined level of taste working with difficult materials and techniques. It can be theorized that Carver in many cases was not merely using textile art techniques for a hobby, but for experimentation with stitches, motifs, patterns and forms. This preliminary research inspires numerous research questions in which a few include: a) Did Carver view his textile creations as "handi-work" or art? b) Who taught Carver these techniques? c) How many extant pieces are there of Carver's fiber art or textile creations? and d) Who influenced Carver's sense of aesthetics? Dissemination of his textile techniques, dyestuff and pigment applied research may inspire a new generation of sustainable conscious textile artists. The next steps of this research includes the analysis of Carver's fiber art artifacts at the Tuskegee Institute National Historic Site, the analysis of artifacts owned by Mariah Watkins, the African American woman he lived with in Neosho, Missouri and the comparison of these artifacts to supplemental artifacts.

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