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## Illustrating Waterfowl at the Wheeler National Wildlife Refuge through a Tactile Artist Book

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# Illustrating Waterfowl at The Wheeler National Wildlife Refuge through a Tactile Artist Book

by

**Stevie Lee Evans**

An Honors Capstone

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### **Abstract**

This Capstone Project Write-up will focus on creating an editioned artist book of a variety of waterfowl found at The Wheeler National Wildlife Refuge. An inspiration for this book is the tactile nature of many children's books. The planning process for this book's structure includes comparing other book structures, creating a variety of mock-ups, taking them apart, and exploring the use of tactile elements in preexisting books. Almost all text and every image presented in The Wheeler Waterfowl project books come from printmaking techniques using linoleum blocks to print on duck cloth. In addition to printing on each page with ink, the back cover has embroidered text. All pages were sewn together to create the final book.

## **Introduction**

The idea of a cloth book that could be handled, thrown, crumpled, and scrunched was one of the biggest appeals when starting this project, especially knowing that it will not be destroyed in any of these ways. Fabric books are fun and interactive to handle. Many of the ones found in research for this project would use batting between the cloth pages to make them plush. In addition, pages would occasionally have cellophane alongside the batting to make a crinkle sound when interacted with.

It was first decided that this project would be to make a fabric book before concluding on the content for it. The Wheeler National Wildlife Refuge is an outdoor reserve easily accessible to the public. When established, the refuge was intended to create a conservation area for waterfowl. Many species have seen a resurgence in their populations due to these efforts. Wheeler is approximately 35,000 acres and across this space, every waterfowl pictured in this project's book can be seen at least once throughout the year.

Book Arts combines various techniques such as bookbinding, paper making, letterpress, printmaking, and more to create artists' books. The Wheeler Wildfowl project is a book printed on 6 different pieces of duck cloth and sewn together like a plush. In order to make each print, at least one linoleum block was carved to make the image. In total, 8 blocks were carved and printed with a collective 4 colors of ink.

## Research and Planning

### Structure

The main inspiration for this project was based on the structure that many interactive cloth baby books utilize. To assist in learning exactly how these types of books are made commercially, the book *Dinosaur Fun* by Alex + Nova was purchased in order to deconstruct. Between the pages was a layer of batting to make the entire book plush. In one page, cellophane was sewn inside for a crinkling effect. Because of the plush nature of the book, the spine needed to be thicker than one made of paper. Having a spine sewn in two lines, roughly half an inch apart, allows the book to close flat. In order to hide the seams, it was discovered through *Dinosaur Fun* that when sewing the two sides of a page together that the two image areas should face each other. The batting, and cellophane if desired, would lay on the back side of one of the image areas. All pieces would need to be sewn around the outer rectangle to completely close it. A cut would then need to be made along where the spine would cover. This cut needs to be big enough to allow for the entire page to flip inside out. After all of the pages are completed in this way, the spine would then be sewn, hiding the cut along the pages used for flipping. The resulting book structure is like that of a pamphlet.

Similar to *Dinosaur Fun*, this project took on making 3 pages that are flipped as described. These are then sewn together to make the final book. Each page consists of two pieces of cloth against each other for a total of 6 altogether. Once the spine is sewn, there are 12 pages including the front and back cover. Because pages are sewn into other ones in the final step for the spine, one side of a page does not always open to seeing the other side of that same page, rather the flipside of another. The only pages that the entire page is seen at once are the center spread and the

covers when the book is completely extended. These are also the only two pages where the seams of sewing the spine are visible.

Determining the size and orientation of the book came before deciding on the imagery. A variety of mockups were made of paper to get a sense of different scales. Most of the earlier mockups were portrait-oriented with the spine on the left when the front cover faced up. Knowing that the linoleum blocks that were going to be used for printing this project eventually were sized at 18" x 12", a mockup for an 18" x 6" landscape book was created and chosen. Initially, this size was to optimize the space of the linoleum. At this size, one block could be cut in half to have two. This size was also appealing as it is landscape, so once the book is open, the spread becomes long and interactive just to its size.

With batting and various cotton fat quarters, just as a test for sewing a cloth book, the first cloth mockup was created. Of the three pages that are sewn together to make the final book, the middle page has a crinkle element. The choice to make the middle page have this feature is because the waterfowl that would then be associated with the sound would be those associated the most with the sound of water, grass, or flight. Once the fabric was determined later in the project, the final cloth mockup was created before the start of printing.

## **Imagery**

When trying to determine which waterfowl found at Wheeler to include, a list of many species found at the refuge was made. The species to be left on the list were limited to those that could possibly be seen in northern Alabama at least one season of the year. These waterfowl were separated into types, such as ducks, cranes, geese, egrets, herons, and otherwise. When

considering a spread, two pages read together as the book is opened, the waterfowl paired together would have a connecting element.

The front cover has the Wood Duck, a beautiful bird with bright green feathers, mainly on their heads. This page does not directly open to a spread, although when the book is opened and placed content down, the Wood Duck can be seen with the doodle duck on the back cover.

Doodle duck is representative of the artist and family, as a similar type of duck is drawn by his mother frequently. While this duck may not be directly seen at Wheeler, the artist can.

The first inside spread has the Sandhill and Whooping Cranes. The Whooping Crane specifically benefited greatly from the establishment of The Wheeler National Wildlife Refuge as its population was dwindling before being introduced to the conservation area. Sandhill Cranes are a huge attraction to the public at the visiting areas of the refuge. Both of these cranes are considered large, with the Whooping Crane actually being the tallest in North America. These species are also seen together frequently in the same spaces.

The second inside spread has the Snow Goose and Yellow Crowned Night Heron. Snow Geese are found more often in open fields or by bodies of water as compared to the Yellow Crowned Night Heron which are often found in marshes. However, both birds can be found near the coasts. As the Snow Goose is known for prominently white and bright its feathers are, and how they move in large flocks forming a white blanket as they move, Yellow Crowned Night Herons are known for their secrecy as they forage mainly at night and hide along the woodland.

The center spread opens to be the longest page of content in the entire book because the inside of the spine is available for imagery. Three species of ducks, the Mallard, Northern Pintail, and the Northern Shoveler, span across these pages. They are all sitting ducks in the water

together. These species are some of the more commonly seen throughout this book, and they can all be seen together naturally.

The next inside spread shows the Snowy Egret and Little Blue Heron. While these two species can be seen together naturally, it is not as common as other waterfowl combinations presented in this book. However, these two species of birds are often brought up together because a Little Blue Heron juvenile can easily be mistaken for a Snowy Egret adult or juvenile. It is not until later that a Little Blue Heron will develop blue and purple hues to their feathers.

The last spread depicts the Canada Goose and Pied-Billed Grebe. Both of these birds can be seen at Wheeler frequently, both have dense populations throughout Canada. The Canada Goose is infamous for its large size however the Pied-Billed Grebe is distinctively small-bodied with large or disproportionate-sized heads and beaks. They are also not as well versed in flight as the Canada Goose and spend ample time float nesting on dead vegetation on bodies of water.

## **Formatting**

Because most of the spreads are made by combining two halves of different pages, the imagery had to be split and reformatted. The initial designs were drawn on the final paper mockup created for the 18" x 6" book. The pages were separated from each other and lay flat to see which half corresponded to another half. For example, the first page was of the Sandhill Crane, which was to be in a spread with the Whooping Crane. When printed flat on a page, the Sandhill Crane needs to be next to the Pied-Billed Grebe on the tenth page. The pages will eventually be folded in with each other, pages 1 and 10, 2 and 9, 3 and 8, as well as 4 and 7 need to be paired when printing. Pages 5 and 6 are in the very middle and have no folds between

them, so they are printed together. In order to organize the imagery in the way it needs to be printed, the original sketches were developed digitally. Then they were cut and pasted into the necessary format.

This book was to be editioned using linoleum blocks. For each page that contained two halves of a spread, at least one block needed to be carved. That is, for each piece of fabric, there is a minimum of one block. Each block would be able to print one color. There were 4 colors of ink chosen in the end: light and dark brown, blue, and green. Each of these colors was used on two blocks, with the total being 8 in the end.

The cover spread and the middle spread used two colors each, light brown and green. These colors mostly came from the Wood Duck, Mallard, and Northern Shoveler are distinct shades of brown with vibrant green feathers. These spreads are also the biggest and most noticeable structurally. In order to print two colors, two blocks were used for the same image area. The image areas for these two prints were designed as a whole first. Then they were broken down into two images that would overlay with one another, one light brown and one green. Any overlap of these two colors would mix the ink in that area to make a cooler and darker brown. This was utilized for darker details such as in branches and feathers.

For the first and last inside spread, these fowl were printed in dark brown. This brown is most accurate to the color of the birds but also is reflective that the birds in these spreads are more into the earth and marshes. The second and fourth inside spreads were printed in blue. The color is initially inspired by the Little Blue Heron but also compliments the coolness of the Snow Goose's white feathers, the secrecy of the Yellow Crowned Night Heron, and the large bodies of water the Snow Egret gravitates towards most.

## **Carving and Printing**

### **Linoleum**

Linoleum carving is a type of relief printing, also referred to as block printing. Relief printing works as a stamp does. A block of linoleum is carved where the ink is not to be printed. The tallest part of the block that is not carved will be inked and printed. It is the negative space that is carved away. Linoleum also prints in reverse. This is especially important to consider if any text is to be carved, such as in this project.

After the imagery was formatted for linoleum digitally, it was printed and traced onto a sheet of tracing paper cut to the size of the image area. This piece of tracing paper was flipped to the wrong reading side and placed on the linoleum block. A sheet of carbon paper was put between the block and the tracing paper and the image was traced once more. This transfers the imagery onto the block backward. It is necessary for the imagery to be backward on the block so that when it is eventually printed, it will be right reading.

The linoleum blocks for this project were bigger than the image area. This was to allow for kento registration. Kentos are notches in the block where the material being printed sit. Kentos are especially useful when printing more than one color because the placement of the material onto the block stays consistent. Because the notches of the kentos often show up on the material after printing, the piece is trimmed down to a bleed where only the image area is seen. For this project, the printed remains of the kento were hidden as part of the allowance of the fabric.



## **Fabric**

At the start of this project, printing on cloth was a new experience. Suggestions from the project director when choosing fabric was to have it be stiff. Initially, a 100% off-white cotton fabric was chosen. It was thicker than the fat quarters, but not quite stiff. The solution to this that worked well was to cut the pieces, starch each one, then iron them until dry. The plan afterward was to let the ink dry and hand wash the starch out.

By the time a third of the edition was printed, it was evident there was not enough fabric and more would need to be obtained. Locally, the stores were sold out of this particular one and even online it was no longer available for purchase. Though a third of the books were printed, it was more desired to have the fabric consistent for this project. More fabric was obtained, enough for the entirety of the edition, this time with duck cloth.

Duck cloth is a cotton canvas-like material that is heavy and textured. The color of the one used was a warm tan with dark flecks throughout. This cloth is known to be durable and is often used for projects involving wear. Aprons, bags, shoes, and more use duck cloth at times. Because the nature of this fabric is heavy, there was no need to starch the individual pieces or wash them after drying.

## **Printing**

The press that was used to print each of the linoleum blocks was the etching press in the UAH printshop. This press has a bed that is sent in two directions under a large cylinder. This cylinder is set by height in accordance with the bed of the press. This height is important because it is the largest factor in the pressure used to print. To set the press is like setting up to

print with no ink. With every piece layered as if being printed, a rough idea for the height is set and a blank paper is run through as the “print”. An embossment on the paper should appear and the intensity is gauged as to if the setting is correct or needs adjusting. The setting for the press used in this project was determined using a piece of paper rather than cloth. This does not give an accurate setting as the cloth is much thicker than the paper, however, the cloth would not show embossment. Instead, this paper setting was adjusted slightly before printing with ink. The first prints were very light, so the height was lowered for more pressure.

There is a stack of items that ultimately goes through the press at once to print one image. This stack can vary widely based on the situation, but this project had a stack of 5 items. Directly on the bed of the press was a sheet of newsprint. Newsprint is incredibly helpful in keeping the workspace clean. Having a sheet of newsprint directly on the bed of the press keeps ink from smudging off the back of the linoleum block. On top of the newsprint is the linoleum block. Before going through the press, it needs to be inked. This project used oil-based lino ink. Colors were mixed from primary colors, black, and white. A brayer was used to make an even palette of ink and rolled onto the linoleum block. After placing the linoleum block on the newsprint, the cloth would be carefully placed on top. It is likely that if the cloth is moved after resting on the ink that it will smear. It is best to put it down and leave it. Next is another sheet of newsprint. This sheet has the same job of keeping the workspace clean. If the newsprint ever gets too messy, it can be folded and thrown away. The last layer is a press blanket known as the pusher. It is a wool blanket that aids in regulating the pressure throughout.

Once this stack of items is set up, the stack is set up close to the cylinder. The wheel of the press moves the bed underneath the cylinder. Once the stack passes through, it has printed.

The stack can be deconstructed, revealing the printed image. Because the ink is oil-based, it does not dry immediately. The print should be taken to a drying rack and left for at least a few days.

The edition size for this project is 10 books. Editions are meant to be exactly the same. To ensure there were enough prints of each block that would be the same, everything was printed 12 to 14 times. In addition, the two prints with two colors had to be printed roughly 12 times in light brown and immediately printed again in green on each. These prints were done in the same sitting so the overlapping sections would mix before drying at all.

## **Completing the Structure**

### **Drying**

Once all of the prints for this project were completed, they were left to dry for two weeks. By the end of these two weeks, the ink on almost every print was still tacky. They were still in the process of drying. The initial fabric before the duck cloth that had a few prints were dry at this point. It is unknown exactly why these duck cloth prints did not dry within two weeks. It is possible that the starch used for the first cloth aided in speeding up the drying process. The color that was the wettest was dark brown. It is also possible that in mixing the colors something may have happened or that the red ink used in it does not dry as fast as the other colors. Because the ink was tacky and not smearing from touch alone, one book was sewn together in full.

### **Sewing**

The first step in sewing the books was to embroider the back cover. Underneath the doodle duck is the artist's name. This was done in embroidery rather than in carving, like the rest of the text throughout the book, so that it is more like a signature on each book. They were not done in any other form of ink so that it could be felt when touching and holding the book. An embroidery hoop was used to keep the fabric stretched. This step was before sewing any of the pages together.

There were three pages that were sewn together. The cover spread was paired with pages 1 and 10. Batting was sewn on the cover spread side to make it easier to cut between pages 1 and 10. Pages 2 and 9 on one side were sewn together with pages 3 and 8. The batting could be

sewn on either side and either side could be cut. For the middle page, no spine would show at all after the final sewing. It was also in this page that the crinkle element was sewn. The middle spread was sewn with pages 4 and 7. The middle spread would show when opened, so pages 4 and 7 had to be cut to flip inside out.

After all three pages were sewn and flipped, they could be ordered and pinned together. A large needle was necessary to sew all 10 layers together in the spine. This project utilized a tapestry needle. The spine when designed was to be an inch thick. This thickness allows for not only the book to be flat when closed but also to hide the cuts that were made.

## Completed Book



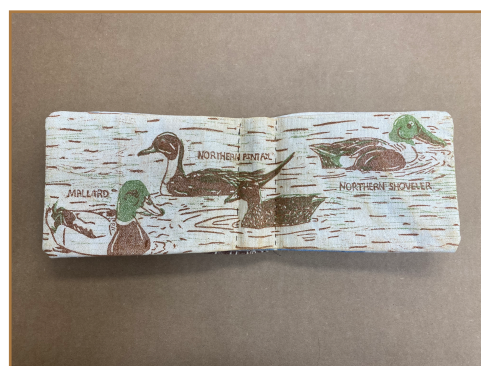
**Front Cover**  
Wheeler Wildfowl; Wood Duck



**First and Second Page**  
Sandhill and Whooping Crane



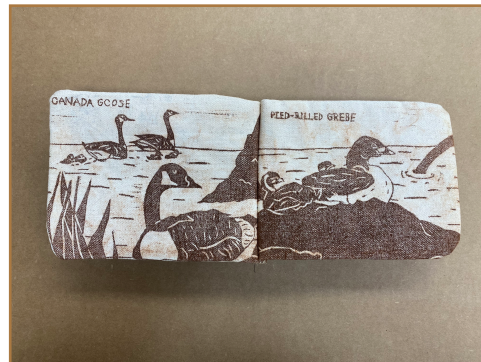
**Third and Fourth Page**  
Snow Goose and Yellow Crowned Night Heron



**Fifth and Sixth Page; Center Spread**  
Mallard, Northern Pintail, and Northern Shoveler



**Seventh and Eighth Page**  
Snowy Egret and Little Blue Heron



**Ninth and Tenth Page**  
Canada Goose and Pied-Billed Grebe



**Back Cover**  
Stevie Evans



**Back and Front Cover Extended**