

### Cocodrie with Pleated Illusions

Lauren Lansdell, Louisiana State University, USA

Keywords: alligator, experimental patternmaking, pleats, leather

The purpose of this design aimed to create a garment using a wild-caught, low-grade alligator skin, and an experimental patternmaking technique. A grade 5 alligator skin was chosen and is considered to be of the lowest quality skin due to the number of imperfections. When the belly is divided into four quadrants with imperfections in each section, it is considered a grade 4/5 and is subjective depending on who is inspecting it (Grading, 2023). This design highlights those imperfections by incorporating the scratches and holes into the yoke.



Figure 1. Holes and scars on skin

Designing with alligator skins is challenging because of their unique shape limitations that must be kept in mind throughout the whole process. Alligator skins are long and narrow limiting the width of the product being cut (Belleau et al., 2004). Scale patterns change in size and shape throughout the skin making it challenging to cut symmetrical pieces. The skin on the belly is more flexible and has a variety of scale shapes compared to the tail which is stiff and thicker (Summers, 2000). This design furthers the use of low-grade skins by successfully incorporating the two 1" to 1.5" holes and scratches that would not typically be used (figure 1).

Other designs have explored Nakamichi's *Pattern Magic* techniques including the Jabra, gathered hole, and shoulder spikes technique (Hakeem, 2022a; Hakeem, 2022b; Plummer, 2015; Hall, 2014). McKinney et al. (2016) used Nakamichi's books to



Figure 2. Half scale mockup

apply the principles of each technique to design in new creative ways. The "parring down and opening out" technique had not been explored further and expands on McKinney's research by repeating the principle of the technique around the body on the bodice and skirt. The pleats start at the waist and are shortened to end at the yoke instead of continuing up to the shoulder. The skirt pleats continue from the waist down to the skirt hem. Instead of tapering the pleat as Nakamichi instructs, it falls off the hem creating more depth.

Aesthetics

The “parring down and opening out” technique had not been explored further and expands on McKinney et al.’s (2016) research by repeating the principle of the technique around the body on the bodice and skirt. The pleats start at the waist and are shortened to end at the yoke instead of continuing up to the shoulder. The skirt pleats continue from the waist down to the skirt hem. Instead of tapering the pleat as Nakamichi instructs, it falls off the hem creating more depth. After testing a few techniques from the pattern magic books on a half-scale dress form (figure 2), the “parring down and opening out” was chosen from the *Pattern Magic 3* book (Nakamichi, 2016, p. 40). This technique moves the bust and waist darts to the shoulder and creates curved style lines to form the pleats. Multiple mock-ups were made to determine the direction and size of the pleats and the best shape for the yoke. Originally the yoke wrapped underneath the armhole and ended at the side seam. However, it had to be scaled back several times in width to fit onto the belly of the gator. Seam allowances could only be added to horizontal seams (shoulders and yoke) to not add extra width to the pattern. Each section, front and back bodice, and front and back skirt had to be mocked up separately due to the asymmetry of the design.

For the final design, the curved vertical pleats were repeated moving continuously around the bodice and skirt opening up in opposite directions. A lightweight poly cotton woven fabric was used for the body of the dress in navy and rust. The color contrast in the navy body and the rust pleats create an illusion depending on the direction of the viewer. When looking at the design from the right, the pleats are open on the skirt, and then when viewing from the left, the bodice pleats are open. An invisible zipper was inserted at the side seam to don and doff. A lightweight polyester lining was used to help maintain the shape of the pleats.

### Methods



Figure 3. Gator Cutting Layout

The yoke was created from a grade 4/5 alligator skin in buttercup. This skin had two holes over 1” long and multiple scratches on the belly taking up significant room. To incorporate the scratches and holes from the skin, the back pattern piece was split down the center back to allow all the pieces to fit (figure 3). The gator’s scale pattern on the back of the yoke is opposite of the front with the larger scales found on the center of the belly to be located on the outside of the yoke. The yoke is lined with rust-colored fabric to allow it to peak through the holes in the gator skin. Lapped seams are used to reduce the bulk and were utilized in this design at the shoulders and center back. The raw edges of the lapped seams were bound with bias binding before construction. The armholes and neckline were also bound (Figure 3). Sewing the yoke to the rest of the bodice proved to be challenging due to the thick nature of the skin and the limited number of times it

could be sewn. A 3/8" wide belt was cut from the gator tail and bound along all the edges. The addition of the belt helps to visually balance the design.

#### Cohesion and Contribution

The design accomplished its purpose of using low-grade alligator skin with an experimental patternmaking technique from Nakamichi. It contributes to existing knowledge by highlighting the imperfections of the low-grade alligator skin that usually would not be used in luxury products. Creating a unique and aesthetically pleasing design with these wild alligators' scars and holes is possible. Nakamichi's "parring down and opening out" technique was adjusted to be used creatively, expanding on McKinney et al.'s (2016) work. Future work could include using the alligator skin with another creative patternmaking technique by Nakamichi, such as "sculpting a surface" (Nakamichi, 2016, p. 24) which requires the patternmaker to break the garment apart into polygons. This technique uses smaller pattern pieces that could easily be laid out on the skin's irregular shape eliminating the amount of waste produced. The use of traditional hand leatherwork techniques for construction could be explored.



