

# The Conservation of a Contemporary Garment: Part I

## Overview of Analyses, Stabilization and Exhibition Measures and the Importance of Collaboration

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### Introduction

In the course of their careers, conservators in private practice can experience some unusual projects. The project discussed in this paper was unusual not only because of what the artifact is, but also because of the nature of issues that were addressed.

The artifact discussed is a pair of Stainfield's sports jockey briefs with Bermuda legwraps, pant model SC84-112c. These were worn by a star of both of the home team's consecutive Global Series wins in the final and deciding baseball game of the 1993 season, the second pennant win.

This project provided interesting and valuable information for conservators in 4 major areas of conservation work: treatment, research, display and collaboration with clients. Given the range and value of the information, this paper serves as an introduction and overview of the project. Subsequent papers will expand on the treatment, research and display aspects of the work and on the collaboration with the clients.

### Background

Members of the consortium which owns the baseball team in question started a baseball collection in 1988 in the hopes of eventually founding a team baseball museum. Since 1991, the author has been retained on contract to advise on the storage and care of the artifacts collected. This conservation work has been unusual in that virtually all items are modern and many are unused, so that conservation work has been almost entirely advisory and preventive in nature.

The textile artifact in question provided an exception to this general rule. The briefs, which had been worn only once, in the deciding game of 1993, and had not been cleaned subsequently, showed the signs of wear, in both senses of the word. It was the evidence of wear that became the focus for the collaboration on the treatment, research and display efforts. The challenges in the conservation of the briefs therefore were 2: to retain the deformations in the garment which gave important evidence on the player's exertions and the forces acting

upon him during the game, and first to convince the clients that preservation of these features was useful for both research and display purposes.

It is critical to understand that baseball officials had not thought to attempt to preserve the briefs in the uncleaned state, let alone to study their present condition for evidence of the rigours of the game or to put them on public display. However, they were persuaded otherwise by the sound reasoning of the author who pointed out the value for study and educational purposes of the creases and contours acquired during play. In this way, baseball professionals have learned of the work of conservators and their contribution to society.

### Historical background

The earliest records from Western civilization of men wearing under pants are from Greece. Until the 6th century B.C. the typical Greek male wore his toga over an under-tunic, a short loose-fitting shift gathered at the shoulders. Depending on the weather, this under garment would vary in length, sleeve length and fabric. During the 6th century, however, slaves from the northeast were brought to Greece in large numbers. These men wore generally linen, trouser-legged briefs tied at the waist. These briefs were gradually adopted by Greeks, and have been a part of the male wardrobe continuously in the Western world since that time.

The jockey brief, quite surprisingly, was not developed until this century. This garment was first introduced by an American firm in Chicago in 1937 and caught on quickly in United States though its acceptance in other parts of the world was not widespread until after the Second World War.

### Description of Briefs

The artifact in question is an amalgamation of 2 of Stainfield's earlier products, the sports brief and the courier road pants. (See Figure 1) The model was developed to give greater support and warmth to the thigh and lower back muscles of athletes involved in



Figure 1 verso (left), recto (right)

strenuous activity in cooler temperatures. The garment is basically the sports brief to which certain minor alterations have been made and to which the leggings portion of Stainfield's courier road pants have been added. The fundamental garment is Stainfield's pant model SC84-112, first available in 1984. This model, c, was first introduced in 1990. The pant body, based on Stainfield's model SM72-51, is of 100% bleached cotton with polyester interior reinforcements within the 2.2 cm leg banding and a 4.41 cm wide elasticized waist band. The leggings portions are based on the leggings portions of Stainfield's model CM78-64. They are of spandex (formula patented) and consist of Bermuda leg cylinders with a raglan cut both front and back. At the front the edge of the garment is a straight diagonal which corresponds roughly with the line of the groin. The cut continues right to the waistband so that the spandex portions for each leg are separate here. At the back the spandex portions for each leg are joined by a 8.9 cm strip beneath and attached to the waistband. The border of the spandex travels down the back of each leg in a slight concave curve to permit the wearer to sit down comfortably without interference from the spandex. All seams of the garment are in polyester/nylon 50:50 blend thread.

### Condition of Briefs

Team members had agreed before the final game to donate their uniforms to the museum collection. This uniform including the briefs came to the conservation studio 18 hours after the end of that game. The briefs were brought with the rest of the star's uniform to the conservation studio in a gym bag. Fortunately the briefs were at the top of the bag so that although they were still totally soaked with sweat and other body oils, they nonetheless retained the physical distortions to their form caused by their use in the game.

The physical distortions were numerous. The spandex of the right front of the leg wrap had been distended so that the elasticized material had lost a noticeable amount of its resilience. The spandex at the top of the inner left leg, on the other hand, is crumpled in 4 rounded pleats reminiscent of an Elizabethan collar. Eleven elastic fibres had been broken, 2 of them in 2 places, on the waistband above the seam between the spandex and cotton on the right side. Below the broken fibres was an area where cotton fibres had been seriously abraded on the outside of the garment. The spandex strip just below the waistline at the back has been distended to form a tumescence approximately 6 cm from top to bottom and 14 cm long. This distortion is slightly to the left of centre.

There was 2 unusual discolourations on the artifact. There was a very faint, brownish cast on the inside of the aforementioned tumescence at the back of the garment. On the abraded cotton threads there was a shiny, greyish discoloration. There was, of course, evidence of bodily secretions consistent with the emotional and physical pressures on the wearer during the game.

### Treatment

The critical factor for consideration in the treatment of the garment was that it could not be washed if the creases were to be retained. However, the nature of the (water-soluble) body fluids that impregnated the garment were such that 2 problems remained, even when the garment had been carefully allowed to air dry. Given the hygroscopic nature of some of the materials of the pants and the relative humidity conditions of the storage area, the pants would always retain a certain percentage of moisture. This was sufficient for the body oils to create

an acid environment for the garment, which was harmful to the spandex. It also caused an unpleasant odour, which was potentially offensive to the visiting public.

Treatment of the garment therefore involved the application of a buffer in the form of a dry and fine powder, which both neutralized the acid and absorbed the odour. As no colourless chemical with the correct properties could be found, a white compound, matching the artifact, was found. An original technique was used to apply this dust without disguising the 2 areas of discolouration.

As mentioned, details of the treatment, materials and techniques, are to appear in a subsequent paper.

### **Research**

Research on the briefs is of 2 types. The former owner was reluctant to discuss the possible causes of the discolourations on his garment. Analyses of these accretions were therefore conducted which led to determination of their causes and, fortuitously, of the causes of the torn fibres of the garment as well. In a following paper the instrumentation and methodology which led to the identification of the aluminum lucky charm pinned in the front of the briefs and the package of chewing tobacco tucked in the back will be discussed.

The second type of research involves studying the loss of resilience of the spandex and the formation of the creases. The author realized that as this garment had been worn during only one game, which had been televised, the entire history of use of the garment had been recorded. This history includes the extent, in space and in time, of the movements of the pants as the wearer swung his bat and ran the bases. It was realized that if the chemical composition of the spandex were known, its physical properties could be deduced. As the physical properties of cotton and polyester are already known, once the information on the spandex was acquired, all the elements would be available necessary to deduce, for the first time, the force of the exertions of this type of athlete.

As Stainfield's has not agreed to share the chemical make-up of its spandex, research on its composition is still under way. Meanwhile a research project using Stainfield's briefs, model SC84-112c, is being

designed. It is expected that this project on distortions to underwear will provide a prototype for research into sports and athletic activities for many years to come. Among other benefits, this project has the potential to provide most meaningful advances in understanding the forces used by athletes in achieving their remarkable feats.

### **Display**

The primary challenge in the display of this underwear was in making the mount. Although the garment had been endowed with a degree of stiffness as a result of the absorption of various products while it was worn in so vigorous a game, it was not sufficiently turgid to retain its shape unsupported. An ingenious method was devised to take a mould of the interior of the garment, as it would have appeared on the baseball player. Three very thin layers of a clear, thermoplastic acrylic were fitted tightly over this mould, with each layer composed of 2 separate pieces joined together like a jigsaw puzzle. As the joins were in different places in each layer the total structure is quite sturdy. Furthermore, it can be assembled inside the pants with minimal disruption to the artifact's fragile contours.

### **Collaboration**

This paper can not be concluded without introducing the topic of cooperating with clients. While baseball officials were at first incredulous of the proposals for the work on the sports briefs, they eventually came to understand the author and follow his reasoning and concede the importance of the work. At their suggestion, the work on the briefs was kept to when all other work on all the uniforms was completed, so that uninterrupted time could be devoted to this project. Team officials made the assistant second base coach available to review the proposal developed for the future experiments on the Stainfield's briefs.

It is hoped by all concerned that the complete formula of the spandex will be confirmed by the beginning of the next playing season. As the author's contracts with the team coincide with the playing seasons, the author expects to have the experimental work on Stainfield's briefs included as a major project in the next contract. The papers on the research and the collaboration will follow the conclusion of this research project.