



Part 1 - Scientists Examine Samples from the Corguinho, Brazil Bed Sheet and Pillowcase

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The cotton and polyester woven bed sheet and pillowcase as I photographed and collected samples from them in the home of Urandir and Jessica Oliveira, Corguinho, Brazil, on February 9, 2003. The original event was around 7:30 p.m. on September 15, 2002,

when Urandir says he was transported in a violet beam from the bed through the ceiling and into an "extraterrestrial craft" at the same time that a "rain of rocks" came down on his farm. Photograph © 2003 by Linda Moulton Howe.

June 6, 2003 Grass Lake, Michigan - I first sent samples of the cloth, wood and stone samples I collected in Corguinho, Brazil in February to biophysicist W. C. Levensgood for initial study and photomicrographs. See: **03-15-03 Earthfiles**. He in turn asked analytical chemist, Phyllis A. Budinger, Owner, Frontier Analysis, Ltd., Chagrin Falls, Ohio, to do infrared studies on small pieces of the samples. Phyllis did not find any "unusual residues" on the cloth samples in her infrared studies. But Phyllis wanted to see some larger pieces of the bed sheet samples. On March 2, 2003, I sent Samples 1 (right leg), Sample 6 (pillowcase), sample of normal control bed sheet, two of the disc-shaped stones from the September 15, 2002, "rain of rocks" and a common Corguinho rock for comparison.

I learned from Phyllis that the blue threads in the bed sheet are dyed cotton and the white threads are polyester (polyethylene terephthalate), PET. The blue and white threads are cross woven together throughout the sheet. Phyllis's infrared study indicated that the pillowcase was also cross woven cotton and polyester. Samples collected beneath the bed sheet were a beige-colored polyester that encased a thin, foam rubber mattress pad.

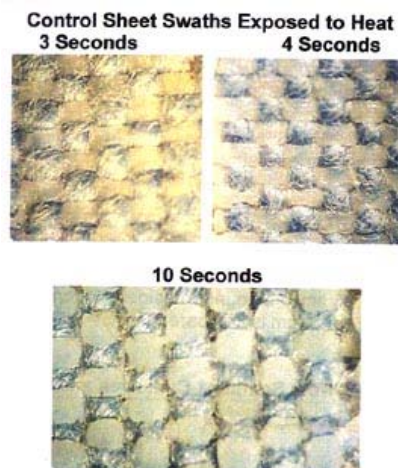
Cotton decomposes, or scorches, at about 148 degrees Centigrade (300 degrees Fahrenheit). But polyester threads don't melt until about 500 degrees F. The darker blue of the body pattern on the bed sheet that looks wet is where the polyester threads melted. Phyllis calls those "halo-like areas." The melted polyester threads are intricately woven throughout the blue cotton threads even where the cotton is unaffected and not scorched or even brown. How can this be if polyester is supposed to melt at a temperature 200 degrees hotter than cotton is expected to scorch?

Phyllis Budinger wrote in her final April 22, 2003, analysis report: "This can be explained by the differences in rates of heat conduction (Thermal Conductivity) of these materials." PET (0.28 W/m*K) conducts heat about ten times faster than cotton (0.029W/m*K). Therefore, a fast burst of heat (above the melting point of PET) would melt the PET, but not degrade the cotton. This was experimentally accomplished with an iron on the control sheet swath by this laboratory" in which a thermocouple was placed between the soleplate and Teflon iron cover to record the temperature range which was between 235-260 degrees Centigrade, which is near the 500 degrees F. melting temperature for polyester.

The assumption that "PET conducts heat about ten times faster than cotton" is disputed further below by the director of a major textile research lab. Further, biophysicist Levengood noted that Phyllis's iron experiment on pieces of the Corguinho bed sheet did not look the same on the reverse side of the Corguinho bed sheet. However, in the actual anomalous bed sheet, the polyester in the body pattern is melted the same way on *both sides* of the fabric.

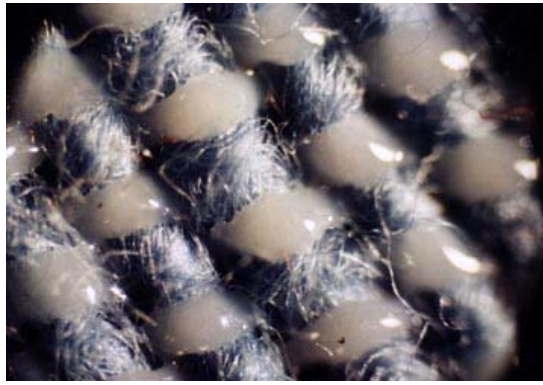
Hot Iron Experiment Flattens Melted Polyester Threads. Corguinho Bed Sheet Polyester Not Flattened.

From her iron experiment, Phyllis showed on page 13 of her report three photographs at 3 seconds, 4 seconds and 10 seconds which she says resemble the halo-like areas on the Corguinho bed sheet. But in her experiment, the melted polyester cross woven with the cotton is flattened out in her photographs.



Page 13, Phyllis Budinger's report about her experiment with "a hot iron at its highest setting" applied to control samples of the Corguinho bed sheet for 3, 4 and 10 seconds. The pressure of the iron has flattened the melted polyester.
Photomicrographs by Phyllis A. Budinger.

Compare Phyllis's flattened polyester threads above to the 40X photomicrograph below taken of the original Corguinho bed sheet Sample 1 by biophysicist W. C. Levengood. The melted polyester threads are neatly contained and rounded, even though vitreous, and are not flattened.



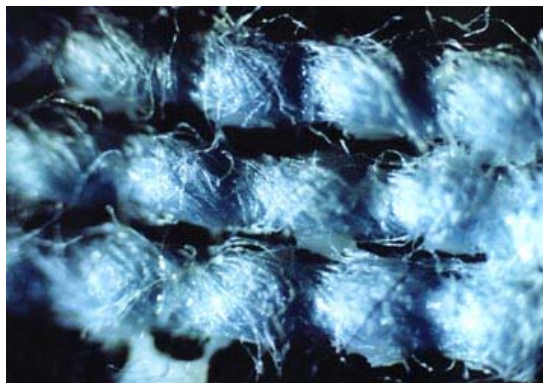
40X photomicrograph by biophysicist W. C. Levengood in early March 2003 of Corguinho bed sheet Sample 1 cut from lower right leg of body pattern.

Hot Iron Experiment On Reverse Side of Fabric Does Not Match Corguinho Bed Sheet

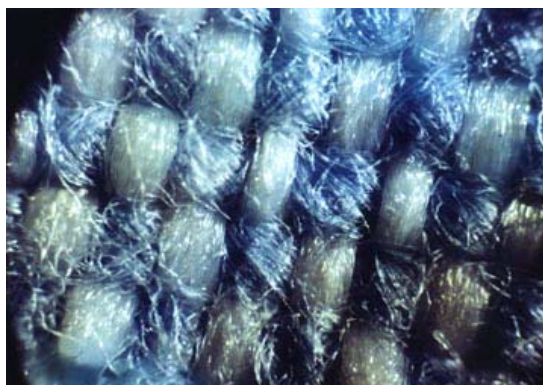
Further, when Phyllis's iron samples are turned over, the polyester on the reverse side is not affected at all in the 3 seconds test and has melted away in the 10 seconds test.



10 Second Test Top Surface: Sample from Corguinho, Brazil bed sheet which Phyllis Budinger subjected to iron test for 10 seconds. The melted polyester is flat and segmented, compared to the fluid weave of the vitreous threads in Sample 1 of the originally affected bed sheet above. Photomicrograph © 2003 by W. C. Levengood.



10 Second Test Reverse Side: Sample from Corguinho, Brazil bed sheet which Phyllis Budinger subjected to iron test for 10 seconds. There are no threads left, only melted drops of melted polyester. Photomicrograph © 2003 by W. C. Levengood.



3 Second Test Reverse Side: Sample from Corguinho, Brazil bed sheet which Phyllis Budinger subjected to iron test for 3 seconds. No polyester melt is evident.
Photograph © 2003 by W. C. Levengood.

Soldering Iron Experiment Does Not Match Corguinho Bed Sheet

Phyllis also brought Nick Reiter, Owner, Avalon Foundation, Energy Dispersive Spectroscopy, Gibsonville, Ohio, into the investigation to do some EDS plots on the Brazil round stones and to examine a piece of the bed sheet sample. In her report, she included the supplied photomicrographs he supplied of his experiment with a soldering iron. Compare to a scorched section of the pillowcase below. The textiles expert from Philadelphia University's School of Textiles and Materials Technology says in Part 2 that neither an iron nor a soldering iron nor any heated object that would come in physical contact with the fabrics could produce the body pattern and explains why.



Images of "soldering iron experiment" supplied by Nick Reiter in Phyllis Budinger's April 22, 2003, analysis report.



Close-up scorched head area of pillowcase, Sample 6 region.
Photograph © 2003 by Linda Moulton Howe.

While the above work was ongoing, I talked with some textile researchers who wanted to see the entire bed sheet and pillowcase, if possible. I contacted Urandir Oliveira and asked if he would be willing to ship them to me and he did.

Continued in **Part 2**.

Credits

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