

TXA News

March, 1999

General News

[New Publication: Fiber Facts](#)

[A Self-Study Inservice](#)

Apparel Industry Outreach

[Apparel Industry Outreach News](#)

Environmental Issues

[Housing Home Environment News](#)

Youth Programming

[Teen Focus '99: Fabric/Flight Connection](#)

[Flash 'N Fashion Update](#)

[Livingsoft Offers -Line Classes](#)

Textile Technology

[Textile Tidbits](#)

Textile Properties

[Guilty Jeans?](#)

[Hair Daze](#)

Consumer Issues

[Laundromats Opt Out of Bulk Dry Cleaning](#)

[Laundry Disks Update](#)

[Useful Websites](#)

[Editors Note](#)

[Extension Faculty and Staff](#)

GENERAL NEWS

New Publication: Fiber Facts

"Fiber Facts", a 48-page Cornell Cooperative Extension information bulletin written by Fran Kozen, is now available from Media and Technology Services. "Fiber Facts" is a consumer primer on the common apparel and home furnishing fibers on the market today. It discusses fiber properties, manufacture, common end uses, cleaning, and storage in non-technical terms. It is designed to enable consumers to make informed purchasing decisions and to give textile items the best care for longevity. Fibers included are: acetate, triacetate, acrylic, modacrylic, cotton, linen, ramie, hemp, lyocell, nylon, olefin, polyester, rayon, silk, spandex, and wool.

"Fiber Facts" is a convenient size (bound, 5 1/2 X 8 1/2) for consumers to keep in their laundry room, send with their child to college, or give as a bridal shower gift!

Please address orders to: Penny Evans, Media & Technology Services, Cornell University, 7 Cornell Business & Technology Park, Ithaca, NY 14850.

Checks should be payable to Media and Technology Services Resource Center. The cost to counties is \$4.50 per copy. The price for all others is \$7.50, including shipping. NYS residents must include sales tax. Out of state orders must be prepaid unless they total at least \$10.00.

An order form is enclosed with this newsletter.



[Top](#)

A Self-Study Inservice: Textile Science for Consumers

Charlotte Coffman

Twenty seven counties registered for Textile Science for Consumers, a do-by-mail inservice. Due to confusion over POUCH pick-up times, the packets arrived in counties the third week of February....one week later than intended. Thus, the deadline to return the completed questionnaires has been delayed until March 22. The second packet will be sent to arrive the week of March 15 with a return date of April 19. Happy reading!



[Top](#)

APPAREL INDUSTRY OUTREACH

Apparel Industry Outreach News

Fran Kozen

Suzanne Loker has been very busy identifying research/extension opportunities, and searching out collaborators and funding for projects. As those projects are solidified, we will let you know about them. Projects underway at this time include:

- We have designed a glossy brochure to introduce Apparel Industry Outreach to the industry, and particularly to state and local legislators, and agencies that might have an interest in the apparel and sewn products industry in New York State.
- We are putting together a directory of apparel and sewn products firms in the state, to be used as a resource guide and communication tool for manufacturers. We have called most firms we are aware of outside of metropolitan New York to verify listings, and we are working with Garment Industry Development Corporation (GIDC) in New York to verify firm listings there. If you know of a new apparel or sewn products manufacturer in your area, or if one that has been there leaves, let us know. It can be difficult to keep track of these firms.
- We are writing a fact sheet on technology in apparel and sewn product manufacturing, to be completed this spring.

We have begun planning for the April issue of *Topstitch*, so if you meant to ask to be on the subscription list and have forgotten, send us a note.

 [Top](#)

ENVIRONMENTAL ISSUES

Housing Home Environment News

Katie DiTella

Water quality related articles will no longer appear in the TXA News. They will be covered in **Housing Home Environment News**, a newsletter that Mark Pierce of the Department of Design and Environmental Analysis at the College of Human Ecology coordinates. To request the **Housing Home Environment News**, contact:

Mark Pierce
Cornell University
Department of Design and Environmental Analysis
E-202 MVR Hall
Ithaca, NY 14853
Tel: 607-255-0431, Fax: 607-255-0305
E-mail: mrp6@cornell.edu

 [Top](#)

YOUTH PROGRAMMING

Teen Focus'99: Fabric/Flight Connection

Charlotte Coffman

TXA and Space Sciences will combine forces to offer *The Fabric/Flight Connection* course at Focus for Teens for the eighth year. Dr. Nancy Breen, author of the program's videotape, will coordinate the event set for June 28 - 30, 1999. Although the agenda is "under construction," teens can expect to test Frisbees, design parachutes, build kites, make model airplanes, and analyze fabrics for their absorbency, flammability, strength, and permeability.

Check your mailbox for a registration packet and encourage teens in your county to join us for this exciting program. If you want to learn more about *The Fabric/Flight Connection* check the source pages posted by the Manufactured Fiber Association that provided partial funding for the videotape production. http://www.fibersource.com/Textile_Flight/breen.htm

[fibersource.com/Textile_Flight/breen.htm](http://www.fibersource.com/Textile_Flight/breen.htm)

http://www.fibersource.com/Textile_Flight/flight.htm

 [Top](#)

Flash 'N Fashion Update

Charlotte Coffman

Over the last couple of years, several counties purchased Flash 'N Fashion, a computer program that makes patterns for doll clothes or paper dolls. Folks of all ages have enjoyed using the program to design garments, explore color, learn about fiber properties, and gather sewing hints. It is now available on CD-ROM and discount prices are available for certain quantities. For the latest information contact Media Motion Publications, PO Box 658, Cherry Hill, NJ 08003-0658, Tel: 609-273-8999.

 [Top](#)

Livingston Offers On-line Classes

Livingsoft has expanded their on-line classes to help you manipulate Dress Shop patterns. You can view, save, print, or archive these classes. Sample topics are:

- * jean jacket with demonstrated flat-fell seams

- * Chanel jacket with a matching dress
- * slips and camisoles
- * coats, one with a shawl collar and one with a hood
- * color blocked sweatsuit
- * clothes for kids

Check current prices and order at the secure web store at www.livingsoft.com or by calling 800-626-1262.

Remember:

If you want to be on the Livingsoft mailing list, send your request to annette@livingsoft.com.

If you want to borrow the eight videotapes on how to use Dress Shop from the TXA Lending Library, contact Paula Smith, Tel: 607-255-3196, Email: pjs15@cornell.edu , or CENET: txa@cce.cornell.edu .

 [Top](#)

TEXTILE TECHNOLOGY

Textile Tidbits

Fran Kozen

Move Over, Nylon and Spandex

Shell Oil Company hopes to compete with nylon/spandex blends with polytrimethylene terephthalate (PTT), a cousin of polyester that was too expensive to produce until new methods were developed a few years ago. Their Corterra polymer was first introduced in the carpet industry in 1996, and is now poised to enter the apparel textile market. According to Shell, Corterra offers "a combination of the chemical resistant characteristics of polyester with the elastic recovery of nylon." It can offer the same stretch properties as spandex without worries about sensitivities to sun, bleach and heat.

Apparel Industry Magazine, December 1998

Performance Casual Wear

The popularity of adventure travel has created demand for clothing combining casual fashion with high performance function; a category dubbed Performance Casual Wear. Performance Casual Wear must be comfortable and durable for active wear, easy care, lightweight and compact to pack, and look presentable for dinner. Large catalog retailers such as L.L. Bean (www.llbean.com), Lands' End (www.landsend.com), Eddie Bauer (www.eddiebauer.com), and REI (www.rei.com), as well as the specialty catalog TravelSmith (www.travelsmith.com), all carry an assortment of appropriate Performance Casual Wear, often made of Supplex® nylon, CoolMax® polyester, or synthetic microfiber. Garments often feature multiple pockets, or are convertible, as from long pants to shorts.

Teflon socks for blister prevention?

Cornell athletic teams helped test Blister Guard® socks by sock-maker PTFE Inc. The socks, knit with Teflon® fluoropolymer fibers blended with conventional sock fibers, reduce friction, chafing and skin irritation. Testers called them cooler and drier. All 30 U. S. Marines in a test group reported blisters wearing regular training, but none in the socks containing Teflon. In addition to athletes and the military, friction free socks should be appealing to diabetics, who have difficulties healing foot injuries. For more information, call 1-888-311-SOCK

DuPont Magazine, Number Three, 1998

Soccer Clothing Goes High Tech

While athletes in many other professional sports have been sporting high tech uniforms designed to keep them cool and comfortable, traditional soccer apparel hadn't changed until Nike took a look at the sport. Nike and DuPont teamed up to design jerseys in polyester microfiber to be soft, breathable, and dry next to the skin. Nike tested garments on athletes for range of movement and comfort, then manufactured jerseys for half a dozen of the national teams competing in the World Cup last summer. Players gave the jerseys high marks for quality, durability and performance.

DuPont Magazine, Number Three, 1998

New Generic Fibers

The Federal Trade Commission has approved two new generic fiber classes: melamine and fluoropolymer. BASF will market melamine as Basofil. Basofil chars rather than burns, maintains its integrity up to 260 degrees Centigrade, and resists ultraviolet light. This fire-blocking fabric will be used in firefighter gear, aircraft seating, upholstery/curtains for public places. DuPont produces fluoropolymer under the well know trade name of Teflon. It is frequently found as one of the layers on GoreTex materials used in clothing, and is used in products such as the anti-blister socks described above. All textile products containing these fibers must now identify them by their generic names on fiber content labels.

New fiber classes are seldom created. Since the Textile Fiber Products Identification Act of 1960, only eight names have been added to the official list. The two latest ones were elastoester in 1997 and lyocell in 1993.

 [Top](#)

TEXTILE PROPERTIES

Guilty Jeans?*Charlotte Coffman*

Most people identify jeans by the brand, the color, the style, or the fit but FBI Agent Richard Vorder Bruegge has a different system. He claims that the fading pattern along the side seam of the pant leg is as distinctive as a bar

code or a fingerprint.

When jeans are sewn, the operator pushes the fabric through the sewing machine a little at a time. Some of the fabric puckers and creates a wavy appearance. With wear and laundering, the color fades—but it fades faster on the top of the pucker than in the spaces between the puckers. The result is a pattern of irregular light and dark splotches unique to each pair of jeans. Other points of wear such as cuffs, pockets, etc. may provide supporting evidence.

Vorder Bruegge plans to test his thesis by mathematically analyzing many pairs of jeans but his theory has already been tested at least once. He testified in a trial that the defendant was the owner of the jeans worn by the videotaped bank robber. The suspect was convicted.

Resource:

1. "Worn Jeans, Chewed Gum Whisper IDs of Criminals," Syracuse Herald American, Sunday, June 7, 1998.



[Top](#)

Hair Gaze

Melania Nice and Charlotte Coffman*

When we introduce the topics of fibers to young children, we try to start with something familiar to them—their hair. They are intrigued to see a strand of hair under a microscope and surprised to learn that human hair is one of the oldest and most abundant fibers in the world. Despite the enormous availability of this fiber, its uses are only beginning to be recognized.

A normal head of hair grows 175-300 hairs per square centimeter at a rate of 14-16 centimeters per year. These hairs are formed from the division of cells in the hair follicle. New cells force the older cells outward where they die and harden into the hair shaft. The hair shaft is composed of the external cuticle and the cortex. The cuticle is made up of overlapping scales growing in one direction much like shingles on a roof. It contains scales, which are thinner and more overlapped than those of animals, resulting in human hair's smoother texture. The cortex contains the protein keratin and the pigment, which determines the hair color. As the hair grows it is lubricated with oil from the sebaceous glands in the follicle.

Human hair is durable, pliable, insoluble, and chemically unreactive. It swells with moisture along its diameter and acts as an insulator by trapping air pockets warmed by body heat.

The best known use for human hair is in the construction of hairpieces and wigs. Hair is also used in other forms of adornment such as hairwork, a popular 19th century craft. Artisans wove, braided, and twisted cut locks of human hair into wreathes and jewelry to wear during mourning, to commemorate a special event, or simply to express their creativity. Today, the internet brings together those interested in upholding this tradition, and one site even offers to create hairwork for you with a lock of your own hair!

If the thought of wearing human hair is not appealing, be warned that you may be doing so unintentionally. A large, international hair trade provides human hair for all kinds of commercial uses. The best hair is used in wigs, but fibers of lower quality are sewn into the pile of furs to increase their volume or used as insulation in coats and jackets.

Hair bristles are used for cosmetic and paint brushes. Pigment extracted from the human hair is used in hair and fabric dyes while hair protein, keratin, is incorporated in animal feeds. NASA is constructing hair pillows, which absorb five times their weight in oil— an idea developed by an ingenious hairdresser.

Medical researchers are experimenting with processed hair as a filling for facial wrinkles, scar tissue, and damaged vocal cords. The powdered protein obtained from a small sample of the patient's own hair is more compatible than the currently used bovine collagen and less painful than extracting fat from the patient's body.

DNA testing on a single hair has produced enough evidence to convict murderers and determine the cause of death. A new drug testing method simply analyzes a lock of hair rather than requiring a urine sample.

Forensics, environmental clean-up, and fashion are only a few of the potential uses for human hair. Like the Victorians, we should consider hair fiber as a valuable commodity.

Sources:

1. _____. Home Edition "Pop Quiz," Los Angeles Times, January 25, 1999.
2. _____. "SwRI's Biocompatible Protein Filler," Medical Materials Update. December 1998.
3. The Concise Columbia Encyclopedia, "Hair" Columbia University Press, NY, NY. 1995.
4. Feughelman, Max. *Mechanical Properties and Structures of Alpha-Keratin Fibers*. University of South Wales Press, Sydney, Australia . 1997.
5. Goldenberg, Susan. "Environmentalists Assail Hair Trade; Huge World Market Has Center in India," The Arizona Republic. September 23, 1998.
6. Knight, Judy. "From Hair to Eternity" <http://www.countrycollector.com/spring98/hair.html>
7. Robbins, Clarence R. *Chemical and Physical Behavior of Human Hair*. Springer-Verlag, NY, NY. 1994.
8. Toomey, Sheila. "Human Hair New Wave in Oil Cleanup?" The Denver Rocky Mountain News, August 26, 1998.

**Melania Nice is a TXA senior who works with extension programs.*

 [Top](#)

CONSUMER ISSUES

Laundromats Opt Out of Bulk Drycleaning

Charlotte Coffman

If you have used the self-service or drop-off bulk drycleaning service at your local laundromat, you may have to look elsewhere after May 15, 1999. Many laundromats that offered this service in the past are choosing not to upgrade their facilities.

In the spring of 1997, the New York State Department of Environmental Conservation revised Part 232, the state regulation affecting perchloroethylene drycleaners. The new regulation stated that existing mixed-use facilities must install a vapor barrier or a room enclosure and a general exhaust ventilation system. The timetable for these changes depended on the type of equipment that the site owned. The final deadline for compliance is May 15, 1999. For laundromats with only one or two drycleaning machines, updating equipment and facilities is simply not worth the money and effort.

Sources:

1. Fowler, Amy. Drycleaning Update, Clean Air News, Vol. 2(1): 7. NYS Environmental Facilities Corporation, Small Business Assistance Program, Albany, NY. 1997.

2. 6NYCRR Part 232: Perchloroethylene Drycleaning Facilities, Just the Facts, NYS Small Business Stationary Source, Albany, NY. August, 1997.

3. Part 232 Reporting and Permitting Requirements for NYS Dry Cleaners, NYS Department of Environmental Conservation, Albany, NY. 1998.

 [Top](#)

Laundry Disks Update

Charlotte Coffman

In the December, 1997 issue of the [TXA News](#), Ann Lemley reviewed the data on ceramic laundry disks from private laboratories and a University of Minnesota study. She noted that the laundry disks cleaned no better than warm water. A more recent and comprehensive study confirms that finding.

Ann Lemley and Barbara Gatewood of Kansas State University compared the cleaning performance of six laundry disks, water alone, detergent at the recommended amount, and detergent at 1/2 the recommended amount (Table 1).

Table 1 Laundry Products Evaluated		
System	Company	Description
Water only	_____	_____

Tide – full scoop	Procter & Gamble	Formulated Detergent
Tide – 1/2 scoop	Procter & Gamble	Formulated Detergent
CleanTex	CleanTec Environmental Inc.	Activated ceramic beads
Ecosave	Teldon of Canada Ltd.	Activated ceramic beads
Euro-Wash Laundry Ball	Consumer Direct Inc.	Magnets in rubber ball
Life Miracle Laundry Ball	Life Miracle Products Inc.	Magnets in hard rubber disk
Natural Wash Plus	Natural Wash Plus	Activated ceramic stones
Turbo Plus Disks plus Itteki Stain Removal Enzyme	Mountain Star	Activated ceramic beads, tourmaline stones, and copper mirofiber

Cotton and polyester fabrics were soiled, washed with the cleaning agents, tumble dried, and evaluated for soil removal by comparing the color differences before and after soiling. A second set of fabrics were stained with blood, ketchup, mustard, coffee, and wine and laundered in the same manner.

The results showed that none of the alternative products removed soil better than water alone. CleanTec removed more stains than the other laundry disks but only detergent removed significant amounts. The advice to consumers remains unchanged. Water alone removes a lot of soil. Detergents provide optimum soil and stain removal.

1. Lumley, A. C. and B. M. Gatewood. Effectiveness of Selected Laundry Disks in Removing Soil and Stains from Cotton and Polyester, Textile Chemist and Colorist. December, 1998.



[Top](#)

Useful Websites

Nancy Breen

Most issues of the TXA News suggest a few websites for you to explore. This issue reminds you of a few favorites and introduces some new finds, grouping all under headings to help you find what interests you. Begin with this general site and then branch out on your own.

- http://einstein.human.cornell.edu/apparel_sites.html

Connects to many interesting textiles and apparel sites.

Fiber Information:

- www.wool.com Provides consumer information about wool, sheep and fashions. Explains woolmark labeling.
- www.cottoninc.com Offers information about cotton and cotton products such as clothing and home textiles such as sheets.
- <http://www.Fibersource.com/> for manufactured fibers. Offers information about manufactured fibers and their uses.

Care Information:

- www.ifi.org Explains the drycleaning process and how to get the best service. Also has care information.
- www.sdahq.org Provides information about all types of cleaning and also recycling of containers.
- www.TextileAffairs.com Gives detailed information about terms and symbols on care labels

Pattern Companies:

- www.butterick.com
- www.mccall.com
- www.simplicity.com
- www.vogue.com
- www.stretch-and-sew.com

Describes new patterns for on-line purchase. Provides measuring instructions, size information, and sewing tips.

Sewing Machine Companies:

- www.berninausa.com
- www.brother.com
- www.husqvarnaviking.com
- www.pfaff.com
- www.singersewing.com

Helps consumers compare sewing machine models and locate dealers. Many also have sewing and fashion information.

Sewing:

- www.sewing.org Features the latest fashion and sewing trends, project instructions, and a Kid's Page. Also links to many sewing related sites organized by category such as fabrics, notions, organizations, buying services etc.
- www.paccprofessionals.org Focuses on concerns of professional dressmakers or those considering sewing for profit.

Shopping On-Line:

- www.wal-mart.com
- www.kmart.com
- www.jcpenny.com
- www.sears.com
- www.macys.com
- www.gap.com
- www.jcrew.com
- www.landsend.com
- www.dkonline.com (Donna Karen)
- www.LLBean.com
- www.eddiebauer.com

Provides on-line shopping opportunities for those with limited access to stores, persons with disabilities or folks who enjoy this convenience. Information is more up-to-date than a printed catalog and includes special sales or opportunities to "window" and comparison shop prior to going to the store. If your favorite retailer/designer isn't listed try substituting that name into the sample addresses above.

 [Top](#)

EDITORS NOTE:

The TXA faculty plans to update the appearance of the TXA News in 1999. If you have an idea for a format or design worthy of the year 2000, give us a call. Your ideas are always welcome.

Charlotte W. Coffman, Editor
Senior Extension Associate

EXTENSION FACULTY AND STAFF

Charlotte Coffman Textiles and Apparel, Youth and Safety Issues 255- 2009 cwc4@cornell.edu	Katie DiTella Water Quality, Septic Systems, Home*A*Syst 255-1943 kld20@cornell.edu	Fran Kozen Textiles and Apparel Industry Outreach 255-0465 fhk2@cornell.edu
Ann Lemley Department Chair, Water Quality, DEL 255-3151 atl2@cornell.edu	Suzanne Loker Textiles and Apparel, Industry Outreach 255-6204 s1135@cornell.edu	Paula Smith TXA News Production Manager 255-3196 pjs15@cornell.edu TXA Loan Library txa@cce.cornell.edu

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 [Top](#)